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Boston Public Works Department

635

ANNUAL REPORT

OF THE

PUBLIC WORKS DEPARTMENT

FOR THE YEAR 1934

[DOCUMENT 24--1935]

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ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE
YEAR ENDING DECEMBER 31, 1934.

BOSTON, January 2, 1935.

HON. FREDERICK W. MANSFIELD,
Mayor of Boston.

DEAR SIR,— In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Public Works Department for the year ending December 31, 1934, is respectfully submitted. The Public Works Department, created by Ordinances 1910, chapter 9, now chapter 27 of the Revised Ordinances of 1925, was formed by consolidating the Engineering, Water and Street Departments.

ORGANIZATION.

The department is composed of six main divisions, viz.:

Bridge and Ferry Division.— This division, under a division engineer, has the charge and care of all bridges used as highways which are, in whole or in part, under the control of the city; and the care and management of the ferries owned by the city, including boats, slips, drops and buildings, and the maintenance and operation of the Sumner Tunnel.

NOTE.—The Boston and Cambridge Bridge Division, so called, is not, strictly speaking, a division of the Public Works Department, as this work is in charge of a commission of two, one member appointed by the Mayor under the provisions of chapter 412 of the Acts of 1904; but because of the fact that the present Commissioner of Public Works is the Boston member of this commission, and also because one half of the expense of the commission is defrayed by the Bridge Service, it is in this report treated as a division of the department.

Highway Division.—This division, under a division engineer, has charge of the construction, reconstruction and maintenance of roadways and sidewalks, and the care of lamps and lighting of streets, parks and alleys.

Sanitary Division.—This division, under a division engineer, has charge of the collection and removal of ashes, garbage and refuse, street cleaning, and the oiling and flushing of streets.

Sewer Division.—This division, under a division engineer, has charge of the construction and maintenance of sewers, catch-basins and waterways.

Water Division.—This division, under a division engineer, has the care of all water pipes in the water system, the laying and relaying of water mains and the care of high pressure fire system.

Water Income Division.—This division, under a division engineer, has charge of financial operations in connection with the sale of water, reading of water meter registrations, making out quarterly water bills for all consumers, forwarding said bills to City Collector's office, installation and maintenance of water meters and enforcement of payment of water bills.

Bridge and Ferry Division.

The vehicular tunnel connecting the city proper with East Boston which was constructed by the Transit Department was turned over to the Public Works Department, and it was named the Sumner Traffic Tunnel and opened for public use with appropriate exercises on June 30, 1934. Toll rates approved by the Department of Public Utilities, as required by chapter 297 of the Acts of 1929, were established as follows:

| | | |
|----|---|--------|
| A. | Passenger car | \$0.25 |
| B. | Tractor without trailer | .25 |
| C. | Trailer not in excess of 2-ton capacity | .25 |
| D. | Trailer over 2 tons to 5-ton capacity | .35 |
| E. | Trailer over 5 tons to 10-ton capacity | .50 |
| F. | Trailer over 10 tons to 15-ton capacity | 1.00 |
| G. | Trailer in excess of 15-ton capacity | 1.25 |
| H. | Trucks not in excess of 2-ton capacity | .25 |
| I. | Trucks over 2 tons to 5-ton capacity | .35 |
| J. | Trucks over 5 tons to 10-ton capacity | .50 |
| K. | Trucks over 10 tons to 15-ton capacity | 1.00 |
| L. | Trucks over 15-ton capacity | 1.50 |
| M. | Bus with or without passengers | .50 |
| N. | Motoreycles | .15 |
| O. | Gas supplied to stalled vehicles in tunnel, per gallon, | 1.00 |

Removal of Stalled Vehicles from Tunnel.

| | | |
|----|--|--------|
| P. | Passenger cars or tractors | \$0.50 |
| Q. | Trailer or truck not in excess of 2-ton capacity | .50 |
| R. | Trailer or truck over 2 tons to 5-ton capacity | .70 |
| S. | Trailer or truck over 5 tons to 10-ton capacity | 1.00 |
| T. | Trailer or truck over 10 tons to 15-ton capacity | 2.00 |
| U. | Trailer or truck in excess of 15-ton capacity | 2.50 |
| V. | Bus | 1.50 |

Work is in progress on the repairing and strengthening of Northern Avenue Bridge, this work being necessary because of a serious break which developed in one of the main members of the draw span and on account of which the bridge had to be closed to travel. A government grant under the P. W. A. was obtained for this work.

The special committee designated under the provisions of chapter 36 of the Resolves of 1933 to consider the Chelsea North Bridge has made its report to the Legislature, and as a result of this report the city has been authorized by chapter 342 of the Acts of 1934 to proceed with the necessary repairs. The expense of the repairs is to be shared by the Commonwealth of Massachusetts, the City of Boston and the City of Chelsea. Plans and specifications covering the work to be done have been prepared and it is expected that the repair work on this structure will begin early next year.

General repairs, most of which were ordered by the United States Steamboat Inspection Service, were made on the ferryboats.

On March 15, 1934, the ferryboat "John H. Sullivan" was sold at public auction.

Highway Division.

Ten major highways were selected for reconstruction under the grant agreement with the United States Government, these streets being Alford street, Charlestown; Savin Hill avenue, Dorchester; Walk Hill street, West Roxbury and Dorchester; La Grange street, West Roxbury; Adams street, Dorchester; Southampton Street, Roxbury and South Boston; Old Colony avenue, South Boston; Hyde Park avenue, West Roxbury; Woodrow avenue, Dorchester, and Ashmont street, Dorchester. Several of these streets have been finished and work is in progress on others, and the entire program will be completed next year.

The gas street lighting contract made ten years ago terminated on April 1 of this year. Arrangements should be made for another contract.

Sewer Division.

A million dollar program for sewerage works has been prepared in connection with which a grant has been requested from the United States Government. The program of work to be done includes the construction of covered channels for Stony brook in West Roxbury; Shepard brook in Brighton; Tenean creek in Dorchester, and other open brook courses which have been the sources of flooding especially following heavy storms. There has also been included in this program the sewerage works necessary in connection with the P. W. A. program of the Highway Division.

Sanitary Division.

The usual activities of this division were carried on during the year. The Sanitary Division yard on North Grove street, which had been the headquarters of the North and West End districts for many years, was closed during the year, when the property was purchased by the Massachusetts General Hospital.

Water Division.

This division during the year carried on its policy of replacing the older and smaller size water mains with pipes of adequate size for fire prevention and for the domestic supply.

Two major improvements were started by the Water Division during the year, namely, the construction of a 48-inch steel water main in Brookline avenue to reinforce the supply of the City Proper, and the construction of a 48-inch steel main from Pond street and the Arborway, through the Arborway, Forest Hills street and Glen road to Walnut avenue and Ruthven street in Roxbury, to provide an adequate water supply for portions of Roxbury and Dorchester, in which the pressure has been insufficient for years. Both of these projects were done under P. W. A. grants from the United States Government.

APPROPRIATION.

The money assigned for the maintenance work of the Public Works Department during the year 1934 was derived from the income of the city raised by taxation. In December, 1933, the department estimates were submitted to the Mayor, in segregated form. His Honor the Mayor made such allowances as he considered necessary and submitted them to the City Council. The total maintenance appropriations as passed by the City Council and approved by the Mayor are shown below:

| | |
|---------------------------------|-----------------------|
| Central Office | \$70,626 00 |
| Bridge Service | 368,263 00 |
| Ferry Service | 308,908 00 |
| Lighting Service | 964,172 00 |
| Paving Service | 923,518 00 |
| Sanitary Service | 2,158,990 00 |
| Sewer Service | 481,812 57 |
| Sumner Traffic Tunnel | 233,286 78 |
| Water Service | 995,060 00 |
| Water Income Division | 233,915 00 |
| Total | <u>\$6,738,551 35</u> |

The expenditures under the several appropriations for the different services for the year 1934 were as follows:

| DIVISIONS AND SERVICES. | Current Expenses. | Special Appropriations. | Total Expenditures. | Balance December 31, 1934. |
|----------------------------|-------------------|-------------------------|---------------------|----------------------------|
| Central Office..... | \$68,175 44 | ..... | \$68,175 44 | |
| Bridge Service..... | 363,552 98 | \$72,353 77 | 435,906 75 | \$104,232 16 |
| Ferry Service..... | 334,380 94 | 2,698 90 | 334,380 94 | 67,264 00 |
| Lighting Service..... | 990,322 41 | ..... | 990,322 41 | |
| Paving Service..... | 1,015,212 53 | 895,915 81 | 1,911,128 24 | 213,479 14 |
| Sanitary Service..... | 2,224,258 90 | ..... | 2,224,258 90 | |
| Sewer Service..... | 454,503 66 | 511,281 27 | 965,784 93 | 231,218 42 |
| Sumner Traffic Tunnel..... | 222,364 68 | ..... | 222,364 68 | 47,635 32 |
| Water Service..... | 940,578 22 | 1,925 80 | 942,504 02 | 42,908 22 |
| Water Income..... | 232,322 40 | ..... | 232,322 40 | |
| Totals..... | \$6,845,672 16 | \$1,484,175 55 | \$8,327,148 71 | \$706,737 26 |

Yours respectfully,

C. J. CARVEN,
Commissioner of Public Works.

REVENUES, 1934.

On Account of the Public Works Department, As Per Auditor's Statement.

| | | |
|--|-------------|--------------|
| Central Office: | | |
| Sale of plans, etc. | | \$2,293 50 |
| Bridge Service: | | |
| Albany Street Bridge | \$358 66 | |
| Chelsea North Bridge | 1,314 57 | |
| Meridian Street Bridge | 7,951 88 | |
| Clerical services | 187 50 | |
| Sale of material | 60 00 | |
| Rent | 200 00 | |
| | <hr/> | 10,072 61 |
| Charlestown Bridge: | | |
| Rents | | 1,530 00 |
| Ferry Service: | | |
| Tolls | \$50,990 00 | |
| Rent | 169 00 | |
| Commission on telephones | 68 50 | |
| Cleaning telephone booths | 48 00 | |
| Concessions | 11 00 | |
| Sale of old boiler | 35 00 | |
| | <hr/> | 51,321 50 |
| Lighting Service: | | |
| Damage to posts | | 275 00 |
| Paving Service: | | |
| From assessments on abutters for cost of laying sidewalks in front of their premises, including materials for the same | \$43,486 46 | |
| Permits | 9,905 36 | |
| Sale of material | 1,354 72 | |
| Labor and materials (chapter 27, section 9, Revised Ordinances, 1925) | 15 00 | |
| Labor and materials furnished, etc. | 88 16 | |
| Use of rollers | 31 25 | |
| Rent of signs | 615 00 | |
| Repairing signs | 80 62 | |
| Sale of junk | 19 40 | |
| | <hr/> | 55,595 97 |
| Sanitary Service: | | |
| Collection of commercial waste | \$23,108 14 | |
| Sale of manure | 1,062 24 | |
| Removal of dirt | 626 27 | |
| Damage to fence | 50 21 | |
| Sale of junk, etc. | 114 25 | |
| Cleaning dumps | 55 00 | |
| | <hr/> | 25,016 11 |
| Sewer Service: | | |
| Pumping sewage, amount received from Com- monwealth | \$17,857 00 | |
| Entrance fees | 2,191 06 | |
| Labor and materials furnished | 996 20 | |
| Assessment | 14 52 | |
| | <hr/> | 21,058 78 |
| <i>Carried forward</i> | | \$167,163 47 |

| | | | | | | | | | |
|--|--|--|--|--|--|--|-------------|----|-----------------------|
| <i>Brought forward</i> | | | | | | | | | \$167,163 47 |
| Sewerage Works: | | | | | | | | | |
| Assessment, under chapter 450, Acts of 1899, | | | | | | | \$55,706 | 66 | |
| Interest on ditto | | | | | | | 14,296 | 22 | |
| Services of inspector | | | | | | | 63 | 52 | |
| Rent | | | | | | | 260 | 00 | |
| | | | | | | | | | 70,326 40 |
| Separate Systems of Drainage: | | | | | | | | | |
| Assessments | | | | | | | \$22 | 68 | |
| Interest on ditto | | | | | | | 2 | 27 | |
| | | | | | | | | | 24 95 |
| Water Service: | | | | | | | | | |
| Water rates due: | | | | | | | | | |
| For the year 1934 and prior | | | | | | | \$4,345,376 | 96 | |
| Service pipes for new water takes, extend- | | | | | | | | | |
| ing, repairing, etc. | | | | | | | 26,485 | 55 | |
| Labor and materials | | | | | | | 2,827 | 74 | |
| Elevator and fire pipe connections | | | | | | | 4,200 | 18 | |
| Fees on overdue rates | | | | | | | 14,704 | 86 | |
| Shutting off and letting on water | | | | | | | 8 | 00 | |
| Testing meters | | | | | | | 331 | 03 | |
| Relocating hydrants | | | | | | | 336 | 38 | |
| Damage to hydrants | | | | | | | 665 | 97 | |
| Board of horse | | | | | | | 547 | 50 | |
| Sale of junk | | | | | | | 604 | 66 | |
| Weighing fees, etc. | | | | | | | 219 | 95 | |
| | | | | | | | | | 4,396,308 78 |
| | | | | | | | | | <u>\$4,633,823 60</u> |
| Sumner Traffic Tunnel: | | | | | | | | | |
| Tolls | | | | | | | \$270,000 | 00 | |

The records of the department show that there are now 2,639 persons eligible for employment in the several divisions, and of that number 2,601 were upon the January, 1935, pay rolls.

Grade and Number of Employees.

| TITLE. | SERVICES. | | | | | | | | | | |
|------------------------------------|-----------------|----------------------|--------|-----------|------------------|--------|---------|---------|---------------|--------|--------|
| | Central Office. | Paving and Lighting. | Sewer. | Sanitary. | Street Cleaning. | Ferry. | Tunnel. | Bridge. | Water Income. | Water. | Total. |
| Commissioner..... | 1 | | | | | | | | | | 1 |
| Division engineers..... | | 1 | 1 | 1 | | | | 1 | 1 | 1 | 6 |
| Engineers, chief..... | | 1 | 1 | | | | | | | | 2 |
| Executive secretary..... | 1 | | | | | | | | | | 1 |
| Executive clerks..... | 2 | 2 | | | | | | 1 | 1 | 1 | 7 |
| Clerks..... | 7 | 31 | 11 | 10 | 2 | 1 | 1 | 2 | 28 | 22 | 115 |
| Assistant engineers (civil)..... | | 14 | 26 | 1 | | | | 9 | | 5 | 55 |
| Draughtsmen..... | | 1 | 11 | | | | | 2 | | 2 | 16 |
| Instrumentmen..... | | 14 | 13 | | | | | 4 | | 5 | 36 |
| Rodmen..... | | 7 | 7 | | | | | 2 | | | 16 |
| Inspectors..... | | 33 | 40 | 50 | 25 | | | 4 | 1 | 16 | 169 |
| Foremen..... | | 11 | 5 | 12 | 10 | | | 1 | | 8 | 47 |
| Subforemen..... | | 17 | | | | | | 3 | | | 20 |
| Blacksmiths and assistants..... | | 2 | 2 | 14 | | | | | | 2 | 20 |
| Blueprinters..... | | | 6 | | | | | | | | 6 |
| Chauffeurs-teamsters..... | | 48 | 20 | 78 | 37 | | 16 | 3 | | 8 | 210 |
| Carpenters and assistants..... | | 12 | 3 | 5 | | 1 | | 12 | | 6 | 39 |
| Chief inspectors..... | | 1 | 1 | | | | | | | | 2 |
| Cement testers and assistants..... | | | 4 | | | | | | | | 4 |
| Chemists and assistants..... | | 2 | | | | | | | | | 2 |
| Constables..... | | 11 | 1 | 5 | 2 | | | | 6 | | 25 |
| Cashiers and assistants..... | | | | 1 | | 1 | 2 | | 2 | | 6 |
| Drawtenders and assistants..... | | | | | | | | 126 | | | 126 |
| Deckhands..... | | | | | | 12 | | | | | 12 |
| Engineers (steam)..... | | 8 | 5 | | | 9 | | | | | 22 |
| Electricians..... | | | 2 | | | | 9 | 1 | | | 12 |
| Emergency repairers..... | | | | | | | | | | 42 | 42 |
| Firemen..... | | 3 | 9 | | | 22 | | | | | 34 |
| Gatemen..... | | | 4 | | | 7 | | | | | 11 |
| General foreman..... | | | | | | | | | | 1 | 1 |
| Carried forward..... | 11 | 219 | 172 | 177 | 76 | 53 | 28 | 171 | 39 | 119 | 1,065 |

Grade and Number of Employees.—Continued.

| TITLE. | SERVICES. | | | | | | | | | | |
|--|--------------------|-------------------------|--------|-----------|---------------------|--------|---------|---------|------------------|--------|--------|
| | Central Office. | Paving and Lighting. | Sewer. | Sanitary. | Street Cleaning. | Ferry. | Tunnel. | Bridge. | Water Income. | Water. | Total. |
| <i>Brought forward</i> | 11 | 219 | 172 | 177 | 76 | 53 | 28 | 171 | 39 | 119 | 1,065 |
| Harnessmaker and assistants | | | | 3 | | | | | | | 3 |
| Head chauffeurs | | 5 | | | 1 | | | | | | 6 |
| Horseshoers | | | | 6 | | | | | | | 6 |
| Janitor | | | | | | 1 | | | | | 1 |
| Matrons | | | | | | 4 | | | | | 4 |
| Joiners | | | | | | 3 | | | | | 3 |
| Laborers | | 245 | 80 | | 100 | 8 | | 6 | 3 | 98 | 540 |
| Master mechanics | | 2 | | 1 | | 3 | | | 2 | 2 | 10 |
| Machinist and assistants | | | 3 | | | 6 | 1 | 1 | | 13 | 24 |
| Meter testers | | | | | | | | | 2 | | 2 |
| Meter readers | | | | | | | | | 38 | | 38 |
| Masons (stone and brick) | | | 10 | 1 | | | | | | 1 | 12 |
| Medical inspector | | | | 1 | | | | | | | 1 |
| Oilers, filth hoisters | | | 19 | | | 7 | | | | | 26 |
| Pipe fitters | | | | | | 2 | | | | | 2 |
| Pavers | | 44 | | | | | | | | 1 | 45 |
| Plumbers | | | | | | | | | | 11 | 11 |
| Painters | | 6 | 1 | 10 | | 3 | | 3 | | 2 | 25 |
| Captains | | | | | | 9 | | | | | 9 |
| Quartermasters | | | | | | 7 | | | | | 7 |
| Repairers and auto mechanics | | 23 | 2 | | 2 | | | | 19 | 110 | 156 |
| Roofer | | | | | | 1 | | | | | 1 |
| Rigger | | | | | | 1 | | | | | 1 |
| Sealers | | | | | | | | | 2 | | 2 |
| Sewer flushers | | | 27 | | | | | | | | 27 |
| Supervisors and deputy | 1 | 2 | | 1 | | 1 | | 1 | | | 6 |
| Stenographers | | 1 | 2 | | | | | | | | 3 |
| Stonecutters | | 10 | 2 | | | | | | | | 12 |
| Superintendents and deputy | | 2 | | | | | | | 1 | | 3 |
| Stockkeeper | | | | 1 | | | | | | | 1 |
| Stablemen | | 6 | | 12 | 20 | | | | | | 38 |
| Teamsters and helpers | | 48 | | 306 | 116 | | | | | | 470 |
| <i>Carried forward</i> | 12 | 613 | 318 | 519 | 315 | 109 | 29 | 182 | 106 | 357 | 2,560 |

Grade and Number of Employees.— Concluded.

| TITLE. | SERVICES. | | | | | | | | | | |
|--------------------------------|-----------------|----------------------|--------|-----------|------------------|--------|---------|---------|---------------|--------|--------|
| | Central Office. | Paving and Lighting. | Sewer. | Sanitary. | Street Cleaning. | Ferry. | Tunnel. | Bridge. | Water Income. | Water. | Total. |
| <i>Brought forward</i> | 12 | 613 | 318 | 519 | 315 | 109 | 29 | 182 | 106 | 357 | 2,560 |
| Telephone operators..... | | | | | 1 | | | | | 1 | 2 |
| Tollmen-guards..... | | | | | | 10 | 33 | | | | 43 |
| Chief veterinarian..... | | | | | 1 | | | | | | 1 |
| Watchmen..... | | 1 | | 5 | 5 | | | 1 | | | 12 |
| Wharfingers..... | | | | 3 | | | | | | | 3 |
| Wharfman..... | | | | 1 | | | | | | | 1 |
| Wheelwrights and assistants .. | | | | 4 | | | | | | | 4 |
| Yardmen..... | | 5 | 2 | 4 | 1 | | | | | 1 | 13 |
| Totals..... | 12 | 619 | 320 | 536 | 323 | 119 | 62 | 183 | 106 | 359 | 2,639 |

Number of Employees Actually Employed January 1, 1934, and January 1, 1935.

| | Tunnel. | Central Office. | Bridge. | Ferry. | Water Income. | Paving and Lighting. | Sanitary. | Sewer. | Street Cleaning and Watering. | Water. | Total. |
|----------------------|---------|-----------------|---------|--------|---------------|----------------------|-----------|--------|-------------------------------|--------|--------|
| January 1, 1934..... | ..... | 45 | 183 | 142 | 119 | 683 | 555 | 321 | 339 | 385 | 2,772 |
| January 1, 1935..... | 62 | 12 | 183 | 118 | 105 | 607 | 524 | 315 | 320 | 355 | 2,601 |

Total Eligible Force.

| | | | | | | | | | | | |
|----------------------|-------|----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| January 1, 1934..... | ..... | 45 | 189 | 150 | 123 | 695 | 567 | 326 | 344 | 386 | 2,825 |
| January 1, 1935..... | 62 | 12 | 183 | 119 | 106 | 619 | 536 | 320 | 323 | 359 | 2,639 |

Appointments, Transfers, Resignations, Retirements, Deaths, etc., of Employees.

| Died. | Retired. | Transferred to Other Depart- ments. | Transferred to Other Services. | Discharged. | Resigned. | January 1, 1934. | SERVICES 1934, 1935. | January 1, 1935. | Transferred from Other Services. | Transferred from Other Depart- ments. | Reinstated. | Appointed. |
|-------|----------|---|-----------------------------------|-------------|-----------|------------------|--------------------------|------------------|-------------------------------------|---|-------------|------------|
| .... | 2 | .... | 33 | .... | .... | 45 | Central Office..... | 12 | 1 | 1 | .... | .... |
| 4 | 5 | 2 | .... | .... | .... | 189 | Bridge..... | 183 | 1 | 4 | .... | .... |
| 2 | 11 | .... | 19 | 1 | .... | 150 | Ferry..... | 119 | 2 | .... | .... | .... |
| 13 | 31 | .... | 3 | 43 | .... | 695 | Lighting and Paving..... | 619 | 6 | 7 | .... | 1 |
| 16 | 12 | 1 | 5 | 12 | 4 | 567 | Sanitary..... | 536 | 11 | .... | 1 | 7 |
| 7 | 7 | .... | 9 | .... | 4 | 344 | Street Cleaning..... | 323 | 5 | 1 | .... | .... |
| 8 | 6 | .... | .... | 8 | 2 | 326 | Sewer..... | 320 | 8 | 4 | .... | 6 |
| 6 | 23 | 1 | 4 | 2 | 3 | 386 | Water..... | 359 | 9 | .... | 1 | 2 |
| 3 | 5 | .... | .... | 14 | 1 | 123 | Water Income..... | 106 | 2 | 1 | .... | 3 |
| .... | .... | .... | .... | .... | .... | .... | Tunnel..... | 62 | 28 | 2 | .... | 32 |
| 59 | 102 | 4 | 73 | 80 | 14 | 2,825 | Totals..... | 2,639 | 73 | 20 | 2 | 51 |

PART II.
APPENDICES.

APPENDIX A.

REPORT OF THE DIVISION ENGINEER OF THE
BRIDGE AND FERRY DIVISION.

BOSTON, January 2, 1935.

MR. C. J. CARVEN,
Commissioner of Public Works.

DEAR SIR,—I respectfully submit the following report of the income, expenditures and operation of the Bridge and Ferry Division for the year ending December 31, 1934. The expenditures of the division in the regular maintenance appropriations of the department were \$920,298.60. Under a number of special appropriations \$120,444.64 was expended, making the total expenditures for the year \$1,040,743.24. This does not include certain expenditures for construction work for other departments, which work was supervised by the engineers of this division.

The Sumner Traffic Tunnel, constructed by the Transit Department, was opened to travel on June 30, 1934. On this date the division took charge of the operation of the tunnel, and a new service (Tunnel Service) was thereby added to the Bridge and Ferry Services; these three services now constituting the Bridge and Ferry Division.

Summer Street Bridge, over Fort Point Channel, was damaged by fire on July 19, 1934, and repairs were made by the Boston Bridge Works, Inc., W. H. Ellis & Son Company, and Stearns, Perry & Smith at a cost of about \$9,500.

The work of repairing and strengthening Northern Avenue Bridge was started October 3, 1934, under a contract with M. F. Gaddis. A detailed statement of this work appears further on in this report.

The ferryboat "John H. Sullivan" was sold at public auction March 15, 1934, for \$7,050.

The more important works undertaken during the past year in the Bridge Service were the repairing of Bennington Street Bridge; repairs and painting of spans 1 and 2 of Charlestown Bridge; repairs to draw

pier of Chelsea North Bridge; strengthening and redecking Granite Avenue Bridge; repairing and strengthening Northern Avenue Bridge; repairs to Summer Street Bridge, over Fort Point Channel, etc.

House Bill No. 1625, providing for the repair and strengthening of the Chelsea North Bridge, over the Mystic river, by the City of Boston, was passed by the Legislature. Under the provisions of this act the City of Boston is authorized to repair and strengthen the bridge at a cost not exceeding \$270,000; 50 per cent of the cost of this work is to be paid by the Commonwealth, from the Highway Fund. Of the balance of said cost $62\frac{1}{2}$ per cent shall be paid by the City of Boston and $37\frac{1}{2}$ per cent by the City of Chelsea. Work will be started early in 1935.

Federal Emergency Relief Administration.

The following Federal Emergency Relief projects were supervised by this division:

Meridian Street Bridge, Longfellow Bridge and Broadway Bridge were chipped, cleaned and painted.

Repaving and repairs were made to the approaches of the Meridian Street Bridge and the Chelsea Viaduct was repaved and a guard rail constructed.

Major repairs were made to Blakemore Street Bridge, in order to increase the load capacity from 8 to 15 tons.

The North and South Ferry Drops, Boston and East Boston sides, were painted.

Work of splicing piles, replacing decayed pipe caps, stringers, planking, etc., was done at Dover Street Bridge, on both fender piers. Both piers have been practically rebuilt.

Survey and record plans were made of the various drawbridges.

The Election Department building, at the corner of Broadway and Dorchester avenue, was repaired.

Work was done under a project for the removal of coal pocket and the construction of a recreation pier at the North Ferry, East Boston.

Extensive alterations were made to the office of the Bridge and Ferry Division, 602 City Hall Annex.

Bennington Street Bridge, East Boston.

A contract with Groisser & Schlager Iron Works was approved by the Mayor on June 14, 1934, to renew two of the steel floor beams and to make certain other

repairs to the other steel members, such as additional cover plates, new seat angles and the incidental welding and riveting. Work under this contract was completed on June 20, 1934, at a cost of \$1,108.61.

Charlestown Bridge.

A contract with John F. Shea Company, Inc., was approved by the Mayor on November 30, 1934, to repair the first two fixed spans, Boston side. The steel floor beams of these two spans were severely corroded and reduced in area of cross-section primarily on account of the nature of discharge from an adjacent factory; and the floor beams, steel struts, braces, etc., were also appreciably weakened. In order to make the necessary repairs to the steel, the whole deck system will have to be removed and replaced by all new material, with the exception of the paving blocks. Work under this contract is not yet completed.

Chelsea North Bridge.

A contract with Rendle Contracting and Dock Building Company to repair the draw pier was approved by the Mayor on July 3, 1934. These repairs were required on account of damage caused on April 21, 1934, by a tow boat jamming between the pier and the vessel in tow. Work was completed under this contract on October 4, 1934, at a cost of \$7,190.30. The bill of costs has been turned in for collection from the tow boat company handling the tow.

Granite Avenue Bridge, Over Neponset River.

A contract with the Codman Hill Construction Company, to strengthen and redeck the bridge, was approved by the Mayor of the City of Boston and the Chairman of the Board of Selectmen of Milton, on November 6, 1934. With the increasingly heavy loads passing over this bridge and the great speed at which they travel, it became necessary to appreciably strengthen the entire deck system in order to maintain satisfactorily a proper wearing surface on the roadway. The work under this contract has not yet been completed.

Northern Avenue Bridge.

On January 26, 1934, one of the links connecting the top chord of one of the center trusses with the draw

tower failed utterly and the adjacent links parted. With the failure of these members the draw was permanently put out of commission until comprehensive repairs or renewals are made. Due to the nature of the emergency the Boston Bridge Works was called in at once to block up the structure to prevent a possible complete collapse of the whole draw structure. On April 9, 1934, the Mayor approved an unadvertised contract with the Boston Bridge Works to cover the work of supporting the structure and for certain other miscellaneous work incident to a thorough inspection of the draw and fixed spans. Work under this contract was completed June 26, 1934, at a cost of \$14,533.72.

On September 27, 1934, a contract with M. F. Gaddis was approved by the Mayor for repairing the fixed spans and the draw. This work, carried on as a P. W. A. project, was decided on only after lengthy consideration of the problem from various angles especially with regard to the advisability of removing the present structure and building a new bridge from abutment to abutment with a different type of draw. The consultants, J. R. Worcester & Co., retained by the city finally decided on the repairs program as called for in the contract entered into with M. F. Gaddis. Under the terms of the contract the work will be completed on June 27, 1935.

Summer Street Draw Bridge, over Fort Point Channel.

A contract with Eugene Riccardelli to clean and paint the draw span, was approved by the Mayor October 27, 1934. All steel work was painted which could be reached without removing any of the wooden deck and sub-structures. Work under this contract was completed on November 15, 1934, at a cost of \$2,150. Under the terms of the contract, the city furnished the paint, but the contractor furnished all labor and temporary structures to complete the contract.

Day Labor Force.

The day labor force patched sheathing and headers on Meridian Street Bridge; placed new sidewalks on Blue Hill Avenue Bridge; patched sidewalks and headers on Chelsea North Bridge; repaired drawhouse and fences at Warren Bridge; patched sheathing and decking of Boston Street Bridge; patched sheathing and

placed new headers at Albany Street Bridge; patched sheathing at Broadway, Charlestown and other bridges; cleaned and painted insides and outsides of drawhouses; repaired piers; painted fences and gates; repaired steps and platforms; repaired deck and timber under paving at Chelsea North Bridge; rebuilt one side of Bennington Street Bridge and painted and cleaned girder tops; rebuilt bulkhead, upstream side, Dorchester Avenue Bridge; repaired damage caused by fire at Summer Street Bridge and repaired shelter houses and built new controller house; removed city equipment from Northern Avenue Bridge preparatory to turning bridge over to contractor and removed old walings, etc., did general carpenter work, painting and made mechanical repairs; also removed snow and ice from surfaces of bridges.

Miscellaneous.

Aside from the purely divisional activities there was an appreciable amount of time and effort spent in other departmental work and work outside of the department itself. It should be noted in every case that work was deemed by the commissioner to be of an emergency nature that required immediate attention of the personnel of this division. Some of these items follow:

Highway Division — Atlantic Avenue Sea Wall and Bulkhead.

Owing to a settlement of the sea wall, accompanied by a sagging of the street pavement and sidewalk between India and Central Wharves, caused in a large measure by the warming up of the engines of the large vessels that use this dock, it was necessary that local repairs be made at once. On June 28, 1934, a contract with A. Orlando, Inc., was approved by the Mayor for repairing the wall where damaged, extending the bulkhead, rebuilding the sidewalk and making other incidental repairs. Work was completed on this contract on September 16, 1934, at a cost of \$13,090.60. Considering the condition of the structure as uncovered at this time it is evident that in the relatively near future the entire length of this sea wall and bulkhead must be renewed or replaced with an entirely new system.

Sanitary Division — Fort Hill Wharf Disposal Station.

A contract with Maurice M. Devine, Inc., to make repairs to the station and its adjacent structures, was approved by the Mayor on July 31, 1934. This work, carried on for the Sanitary Division, is a routine repair of sheathing, decking, curbing, timber and piling. Work under this contract was completed October 3, 1934, at a cost of \$6,952.35.

Institutions Department — Long Island.

A contract with Rendle Contracting and Dock Building Company was approved by the Mayor on June 28, 1934, to make certain repairs to the Front Wharf. This work, done for the Institutions Department, was to make repairs to the wharf piling, timber and planking necessitated by the normal aging and rotting of the existing installation. Work under this contract was completed on October 10, 1934, at a cost of \$4,419.80.

FERRY SERVICE.

The following ferryboats are in commission:

| Name. | When Built. | Length. | Gross Tons. |
|---------------------------|-------------|-------------|-------------|
| Lieutenant Flaherty..... | 1921 | 174 ft. | 755 |
| Ralph J. Palumbo..... | 1921 | 174 " | 727 |
| Charles C. Donoghue..... | 1926 | 174 " 4 in. | 756.77 |
| Daniel A. MacCormack..... | 1926 | 174 " 4 " | 756.77 |
| General Sumner..... | 1930 | 174 " 4 " | 779 |

All these boats are of the propeller type and are all steel boats.

The work of this service for the year consisted entirely of emergency work, with no major repairs and no emergency work of any magnitude.

FERRYBOAT "CHARLES C. DONOGHUE."

A contract with the Quincy Dry Dock and Yacht Corporation for making repairs to the hull, etc., all incidental to the required annual inspection of the vessel by the United States Steamboat Inspection Service, was approved by the Mayor on March 9, 1934. The work covered by this contract was for purely routine repairs and renewals and for painting. The work was completed on March 26, 1934, at a cost of \$2,717.50.

FERRYBOAT "DANIEL A. MACCORMACK."

A contract with the Quincy Dry Dock and Yacht Corporation to make repairs to the hull, etc., was approved by the Mayor on August 23, 1934. In addition to the routine repairs and renewals incidental to the required annual inspection by the United States Steamboat Inspection Service was the reboring of one high and two low pressure cylinders and the reboring of two high pressure valve cages. Work under this contract was completed on October 3, 1934, at a cost of \$5,076.15.

FERRYBOAT "GENERAL SUMNER."

A contract with the Quincy Dry Dock and Yacht Corporation, for making repairs to the hull, etc., all essentially as noted above under ferryboat "Charles C.

Donoghue" was approved by the Mayor on May 21, 1934. The work was completed on July 2, 1934, at a cost of \$3,508.45.

PIER WORK.

A contract with the Roy B. Rendle & Co., Inc., to make certain repairs and removals to the middle pier, South Ferry, Boston, was approved by the Mayor on July 3, 1934. The repairs and renewals were necessary to make good the normal breaking down of the wooden structures. Work under this contract was completed on August 3, 1934, at a cost of \$2,675.25.

Wharf — North Ferry — Boston.

A contract with John F. Shea Company, Inc., for remodelling parts of the headhouse and ferry pier to adapt the site for Police Department use, was signed by the Police Commissioner on July 11, 1934. This work, accomplished for the Police Department, was to provide quarters for the floating equipment of the Harbor Master. The work called for under this contract was completed on September 12, 1934, at a cost of \$3,425.55.

DEPARTMENT FORCE.

During the year machinists, carpenters, painters, riggers and electricians, who make up the personnel of the Ferry Service, made all repairs possible to the plant to the extent of equipment at their disposal. This work was made up mainly of minor repairs to the machinery on the boats, repairs to ferry bridge machinery, ferry bridge roadways and headhouse repairs in general.

Yours respectfully,

L. BAYLES REILLY,
Division Engineer.

BRIDGE SERVICE.

FINANCIAL STATEMENT, 1934.

| | | |
|--|--------------|--------------|
| Boston bridges | \$356,681 82 | |
| Boston and Cambridge bridges | 6,871 16 | |
| | <hr/> | \$363,552 98 |

Total Expenditures.

| | | |
|--|--------------|--------------|
| From maintenance appropriation | \$363,552 98 | |
| From special appropriations | 117,745 74 | |
| | <hr/> | \$481,298 72 |

EXPENDITURES OF BOSTON BRIDGES.

(1.) Administration:

Salaries:

| | | |
|----------------------------------|------------|-------------|
| • Division engineer | \$4,577 04 | |
| Supervisor | 3,041 52 | |
| Engineers and draughts- | | |
| men | 30,840 86 | |
| Clerk | 2,396 01 | |
| Inspectors | 5,285 93 | |
| Medical inspection | 90 00 | |
| Foreman | 2,049 16 | |
| Veterans' pension | 2,955 31 | |
| Holiday | 2,851 03 | |
| Vacations | 1,292 58 | |
| Injured employees | 36 00 | |
| Printing, postage, sta- | | |
| tionery | 1,119 79 | |
| Traveling expenses | 278 26 | |
| Telephone | 13 87 | |
| Engineers' supplies and | | |
| instruments | 77 06 | |
| Typewriter inspection | 18 00 | |
| Office supplies | 179 30 | |
| Office repairs, C. W. A. | 433 86 | |
| Miscellaneous | 122 04 | |
| | <hr/> | \$57,657 62 |

(2.) Yard Stockman:

| | |
|---|------------|
| Clerk and watchmen . . . | \$8,265 33 |
| Traveling expenses . . . | 324 25 |
| Tools, new | 401 19 |
| Tools, repaired | 429 43 |
| Telephone | 265 51 |
| Repairs in yards and build- ings | 280 80 |
| Supplies | 470 47 |

 \$10,436 98

Stockroom:

| | |
|--------------------------------|-------------|
| Stock pur- chased | \$10,255 65 |
| Stock used | 9,392 07 |

 Increase in stock 863 58

\$9,573 40

Automobiles and Trucks.

| | Coupe B-6. | Auto B-8. | Auto B-9. | Auto B-10. | Truck B-11. | Truck B-12. | Truck B-13. | Truck B-14. | Auto B-15. | Auto B-16. | Total. |
|--------------------------------------|---------------|--------------|--------------|---------------|----------------|----------------|----------------|----------------|---------------|---------------|------------|
| Cost, new..... | | | | | | | | | \$663 30 | \$992 00 | \$1,655 30 |
| Chauffeurs' wages..... | | | \$1,381 70 | \$1,365 69 | | | | | | 168 30 | 2,915 69 |
| Storage..... | \$72 00 | \$99 00 | 81 00 | 90 00 | \$96 00 | \$126 00 | | \$126 00 | 9 00 | 18 00 | 717 00 |
| Repairs..... | 280 19 | 124 80 | 590 93 | 142 59 | 34 88 | 189 19 | \$24 10 | 627 63 | 7 77 | 25 25 | 2,047 33 |
| Supplies..... | | 0 92 | 14 58 | 7 57 | 1 75 | 4 66 | 7 44 | 18 57 | | 5 05 | 60 54 |
| Tires, tubes (new and repaired)..... | | 20 00 | 8 00 | 10 00 | 5 00 | 18 30 | | 7 00 | | | 68 30 |
| Gasoline and oil..... | 107 54 | 252 72 | 413 33 | 189 74 | 366 13 | 378 52 | 100 01 | 402 31 | 43 89 | 45 03 | 2,299 22 |
| Registration..... | | | 2 00 | | 2 00 | 2 00 | | 2 00 | 3 00 | | 11 00 |
| Equipment..... | | | | | 5 75 | | | | | | 5 75 |
| Totals..... | \$459 73 | \$497 44 | \$2,491 54 | \$1,805 59 | \$511 51 | \$718 67 | \$131 55 | \$1,183 51 | \$726 96 | \$1,253 63 | \$9,780 13 |

Tidewater Bridges.

| BRIDGES. | Drawtenders' Salaries. | Mechanics' Wages. | Materials. | Repair Bills. | Supplies. | Total. |
|------------------------|---------------------------|----------------------|-------------|------------------|------------|--------------|
| Broadway..... | \$13,749 69 | \$1,343 63 | \$703 09 | \$372 39 | \$299 06 | \$16,467 86 |
| Charlestown..... | 18,973 21 | 2,239 65 | 501 50 | 1,490 23 | 660 96 | 23,865 55 |
| Chelsea North..... | 16,262 01 | 3,217 85 | 854 05 | 1,340 60 | 1,007 33 | 22,681 84 |
| Chelsea South..... | 15,831 20 | 569 21 | 174 70 | 589 02 | 585 86 | 17,749 99 |
| Chelsea Street..... | 13,813 10 | 952 65 | 141 88 | 1,218 89 | 338 63 | 16,465 15 |
| Congress Street..... | 13,483 14 | 1,015 42 | 218 72 | 159 79 | 569 61 | 15,446 68 |
| Dorchester Avenue..... | 13,840 82 | 1,338 47 | 598 67 | 782 64 | 206 60 | 16,767 20 |
| Dover Street..... | 13,787 89 | 783 89 | 805 27 | 574 06 | 189 13 | 16,140 24 |
| L Street..... | 13,912 75 | 535 27 | 570 74 | 725 34 | 239 78 | 15,983 88 |
| Malden..... | 14,387 56 | 265 52 | 70 40 | 823 96 | 497 27 | 16,044 71 |
| Meridian Street..... | 14,484 16 | 2,148 16 | 3,071 05 | 1,847 96 | 346 39 | 21,897 72 |
| Northern Avenue..... | 9,659 73 | 1,593 16 | 439 97 | 2,028 13 | 905 56 | 14,626 55 |
| Summer Street..... | 14,410 43 | 3,406 07 | 3,272 11 | 3,873 13 | 408 93 | 25,370 67 |
| Warren..... | 14,257 86 | 4,188 23 | 701 76 | 1,086 52 | 428 92 | 20,663 29 |
| Totals..... | \$200,853 55 | \$23,597 18 | \$12,123 91 | \$16,912 66 | \$6,684 03 | \$260,171 33 |

Repairs on Inland Bridges.

| BRIDGES. | Labor and Material. |
|---|---------------------------|
| Albany Street..... | \$300 29 |
| Austin Street - Prison Point..... | 7 48 |
| Arlington Street..... | 5 95 |
| Babson Street..... | 132 71 |
| Beacon Street, over Boston & Albany Railroad..... | 156 62 |
| Bennington Street..... | 5,206 94 |
| Blakemore Street..... | 1,487 31 |
| Blue Hill Avenue..... | 1,257 49 |
| Boston Street..... | 185 35 |
| Boylston Street..... | 810 82 |
| Braddock Park-Fallon Street..... | 302 61 |
| Broadway, over Boston & Albany Railroad..... | 133 14 |
| Broadway, over New York, New Haven & Hartford Railroad..... | 458 84 |
| Brookline Avenue..... | 43 45 |
| Cambridge Street, over Boston & Albany Railroad..... | 117 80 |
| Cambridge Street, over Boston & Maine Railroad..... | 31 03 |
| Central Avenue..... | 52 59 |
| Chelsea Street Viaduct..... | 2,568 57 |
| Commercial Point..... | 438 54 |
| Cummins Highway..... | 50 93 |
| Dana Avenue..... | 69 75 |
| Dartmouth Street (rent)..... | 300 00 |
| Dorchester Avenue, over New York, New Haven & Hartford Railroad..... | 345 08 |
| Fairmount Avenue..... | 430 66 |
| Grove Street (Footbridge)..... | 203 61 |
| Granite Avenue..... | 2 25 |
| Longfellow..... | 451 99 |
| Hyde Park Avenue..... | 59 24 |
| Jones Avenue (Footbridge)..... | 141 50 |
| Massachusetts Avenue, over New York, New Haven & Hartford Railroad..... | 133 15 |
| Massachusetts Avenue, over Boston & Albany Railroad (now Edward E. Ginsberg) (new bridge)..... | 10 40 |
| Milton Street..... | 363 77 |
| Milton Lower Mills..... | 29 35 |
| Norfolk Street..... | 23 26 |
| New Allen Street..... | 910 72 |
| Perkins Street (Footbridge)..... | 32 46 |
| <i>Carried forward</i> | \$17,255 65 |

Repairs on Inland Bridges.—Concluded.

| BRIDGES. | Labor and Material. |
|--|---------------------------|
| <i>Brought forward</i> | \$17,255 65 |
| Public Landing, Northern Avenue..... | 120 00 |
| Southampton Street..... | 1 28 |
| West Fourth Street..... | 1,038 73 |
| West Rutland Square - Durham Street..... | 83 39 |
| | <hr/> |
| | \$18,499 05 |
| Cleaning bridges..... | 285 66 |
| Snow removal..... | 814 63 |
| | <hr/> |
| Total..... | \$19,599 34 |

SUMMARY.

| | |
|---|---------------------|
| Administration | \$57,657 62 |
| Yard and stockroom | 9,573 40 |
| Automobiles, trucks and compressors | 9,780 13 |
| Tidewater bridges | 260,171 33 |
| Inland bridges | 19,599 34 |
| | <hr/> |
| Total | <u>\$356,781 82</u> |

SPECIAL APPROPRIATIONS.

BRIDGES REPAIRS, ETC.

| | | |
|---|------------|--------------------|
| BEACON STREET BRIDGE, OVER BOSTON & ALBANY RAILROAD. | | |
| Repair bills | | \$831 60 |
| BERKELEY STREET BRIDGE. | | |
| Repairs | | 954 75 |
| BENNINGTON STREET BRIDGE. | | |
| Groesser & Schlagher | \$1,108 61 | |
| Material, asphalt and plank | 712 32 | |
| Advertising | 9 50 | |
| | | <u>1,830 43</u> |
| BLAKEMORE STREET BRIDGE. | | |
| Advertising | \$13 55 | |
| Material | 19 70 | |
| C. W. A. | 124 62 | |
| | | <u>157 87</u> |
| BOYLSTON STREET BRIDGE. | | |
| Maurice M. Devine | \$345 00 | |
| Remove loose material | 878 27 | |
| | | <u>1,223 27</u> |
| BROADWAY BRIDGE. | | |
| C. W. A. | | 93 87 |
| BROOKLINE AVENUE BRIDGE. | | |
| Repairs | | 925 65 |
| CAMBRIDGE STREET BRIDGE, OVER BOSTON & ALBANY RAILROAD. | | |
| Repair bills | | 1,519 65 |
| CHARLESTOWN BRIDGE. | | |
| Material, paint | \$188 10 | |
| Advertising | 27 50 | |
| Renew water pipe | 982 00 | |
| | | <u>1,197 60</u> |
| CHELSEA NORTH BRIDGE. | | |
| Rendle Contracting Dry Dock Company | \$7,190 30 | |
| Service of diver | 720 00 | |
| Material | 624 16 | |
| Advertising | 93 15 | |
| Repair bills | 2,499 54 | |
| | | <u>11,127 15</u> |
| Carried forward | | <u>\$19,861 84</u> |

PUBLIC WORKS DEPARTMENT.

29

| | | | |
|---|-------------|-------------|--|
| <i>Brought forward</i> | | \$19,861 84 | |
| CHELSEA STREET BRIDGE. | | | |
| C. W. A. | | 50 40 | |
| CONGRESS STREET BRIDGE. | | | |
| Repairs, paving | | 456 19 | |
| CLARENDON STREET BRIDGE. | | | |
| Repairs | | 1,598 72 | |
| CHELSEA VIADUCT. | | | |
| Trucking, C. W. A. | \$739 63 | | |
| Incidentals, C. W. A. | 124 62 | | |
| | | 864 25 | |
| COLUMBUS AVENUE BRIDGE. | | | |
| Repairs, loose materials | | 962 97 | |
| DORCHESTER AVENUE BRIDGE. | | | |
| A. R. Doyle, Inc. | \$992 15 | | |
| A. Orlando, Inc. | 4,360 31 | | |
| Repair bills | 1,933 95 | | |
| | | 7,286 41 | |
| DOVER STREET BRIDGE. | | | |
| Repair drawtenders' house | | 965 00 | |
| LONGFELLOW BRIDGE. | | | |
| Analysis of paint | \$35 00 | | |
| C. W. A. | 93 87 | | |
| | | 128 87 | |
| MASSACHUSETTS AVENUE BRIDGE. | | | |
| Repairs | | 975 15 | |
| MASSACHUSETTS AVENUE BRIDGE, OVER NEW YORK, NEW HAVEN & HARTFORD RAILROAD. | | | |
| Repairs | | 225 00 | |
| MILTON LOWER MILLS BRIDGE. | | | |
| C. J. Maney, Inc. | \$3,914 16 | | |
| Engineering | 170 14 | | |
| | | 4,084 30 | |
| MERIDIAN STREET BRIDGE. | | | |
| C. W. A. | | 651 57 | |
| NORTHERN AVENUE BRIDGE. | | | |
| The Boston Bridge Works, Inc. | \$14,833 72 | | |
| J. R. Worcester Company | 1,424 70 | | |
| New air compressor | 919 45 | | |
| Engineering | 46 11 | | |
| | | 17,223 98 | |
| SUMMER STREET BRIDGE. | | | |
| The Boston Bridge Works, Inc. | \$3,854 91 | | |
| W. H. Ellis & Son Company | 4,474 95 | | |
| Sterns Perry & Smith Company | 1,173 60 | | |
| E. Recardella | 1,827 50 | | |
| <i>Carried forward</i> | | \$55,334 29 | |

| | | |
|----------------------------------|----------|-------------|
| <i>Brought forward</i> | | \$55,334 29 |
| Advertising | \$ 18 50 | |
| Material | 613 80 | |
| Incidentals | 93 88 | |
| Repair bills | 828 68 | |
| | <hr/> | 12,885 82 |

SUMMER STREET BRIDGE, OVER NEW YORK, NEW HAVEN
& HARTFORD RAILROAD.

| | |
|-------------------------|--------|
| Repair paving | 452 60 |
|-------------------------|--------|

WARREN BRIDGE.

| | | |
|-------------------------------------|----------|----------|
| W. H. Ellis & Son Company | \$917 95 | |
| Paving repairs | 807 34 | |
| Incidentals | 89 68 | |
| | <hr/> | 1,814 97 |

WEST RUTLAND SQUARE BRIDGE.

| | |
|--------------------|--------|
| Painting | 300 00 |
|--------------------|--------|

WEST FOURTH STREET BRIDGE.

| | |
|------------------------|--------|
| Repair bills | 390 60 |
| OFFICE | 14 81 |

| | |
|--|--------------------|
| | \$71,193 09 |
| Boston and Cambridge Bridges | 459 82 |
| | <hr/> |
| | <u>\$71,652 91</u> |

CHELSEA NORTH BRIDGE.

Repairs and Strengthening.

| | | |
|--------------------------|---------|----------|
| Advertising | \$38 50 | |
| Test piles | 592 61 | |
| Specifications | 68 75 | |
| License | 1 00 | |
| | <hr/> | \$700 86 |

NORTHERN AVENUE BRIDGE RECONSTRUCTION.

Chapter 366, Acts 1933, as Amended.

| | | |
|--|-------------|-------------|
| M. F. Gaddis | \$37,668 48 | |
| J. R. Worcester & Co. | 2,611 98 | |
| Advertising | 173 40 | |
| Specifications | 79 50 | |
| Office equipment | 77 14 | |
| Electric meter | 5 00 | |
| Telephone | 7 14 | |
| Analysis of paint | 65 00 | |
| New water pipe | 758 64 | |
| Consulting engineer services | 2,269 75 | |
| Engineering | 1,691 94 | |
| | <hr/> | \$45,397 97 |

Expenditures from Special Appropriations, 1934.

| | Balance from 1933. | Total Credits, Including Balances Carried Over and Transfers. | Expenditures During Year 1934. | Balances Unexpended December 31, 1934. |
|--|--------------------------|---|---|---|
| Bridges repairs, etc..... | \$17,210 93 | \$92,210 93 | \$71,652 91 | \$20,558 02 |
| Chelsea North Bridge, repairs and strengthening..... | | 84,375 00 | 700 86 | 83,674 14 |
| Northern Avenue Bridge Re- construction, chapter 366, Acts 1933..... | | 200,000 00 | 45,391 97 | 154,608 03 |
| Totals..... | \$17,210 93 | \$376,585 93 | \$117,745 74 | \$258,840 19 |

Draw Openings, 1934.

| BRIDGES. | STEAMERS. | | | SAILING VESSELS. | | | TUGS. | | | BARGES. | | | ALL OTHERS. | | | TOTAL NUMBER OF VESSELS. | | | Total Number of Carroes. | Total Number of Openings. |
|------------------------|-----------|--------|--------|------------------|--------|--------|--------|--------|--------|---------|--------|--------|-------------|--------|--------|--------------------------|--------|--------|--------------------------|---------------------------|
| | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | | |
| | | | | | | | | | | | | | | | | | | | | |
| Broadway..... | 9 | 13 | 22 | 9 | 1 | 10 | 577 | 88 | 665 | 189 | 36 | 225 | 136 | 30 | 166 | 920 | 168 | 1,088 | 249 | 622 |
| Charlestown..... | 3 | 2 | 5 | 62 | 12 | 74 | 756 | 252 | 1,008 | 376 | 224 | 600 | 364 | 143 | 507 | 1,561 | 633 | 2,194 | 551 | 810 |
| Chelsea North..... | 1,082 | 363 | 1,445 | 26 | 2 | 28 | 7,129 | 1,957 | 9,086 | 1,529 | 812 | 2,341 | 851 | 202 | 1,053 | 10,617 | 3,336 | 13,953 | 2,056 | 5,464 |
| Chelsea South..... | 36 | 5 | 41 | 17 | ..... | 17 | 2,826 | 124 | 2,950 | 102 | 7 | 109 | 1,416 | 53 | 1,469 | 4,397 | 189 | 4,586 | 1,202 | 1,486 |
| Chelsea Street..... | 143 | 54 | 197 | ..... | ..... | ..... | 1,621 | 890 | 2,511 | 358 | 206 | 564 | 436 | 259 | 695 | 2,558 | 1,409 | 3,967 | 602 | 2,225 |
| Congress Street..... | 132 | 23 | 155 | 8 | ..... | 8 | 1,477 | 166 | 1,643 | 341 | 69 | 416 | 714 | 95 | 809 | 2,678 | 353 | 3,031 | 443 | 1,794 |
| Dorchester Avenue..... | 8 | 10 | 18 | 9 | ..... | 9 | 763 | 84 | 847 | 172 | 31 | 203 | 332 | 18 | 350 | 1,284 | 143 | 1,427 | 258 | 794 |
| Dover Street..... | 4 | 14 | 18 | 9 | ..... | 9 | 721 | 92 | 813 | 179 | 32 | 211 | 285 | 12 | 297 | 1,108 | 150 | 1,348 | 252 | 717 |
| L Street 1..... | ..... | ..... | ..... | 248 | 26 | 274 | 166 | 4 | 170 | 693 | 53 | 746 | 763 | 131 | 894 | 1,870 | 214 | 2,084 | 360 | 1,841 |
| Malden..... | 112 | 44 | 156 | 4 | ..... | 4 | 760 | 203 | 963 | 597 | 313 | 910 | 256 | 130 | 386 | 1,729 | 690 | 2,419 | 663 | 1,600 |
| Meridian Street..... | 795 | 278 | 1,073 | 52 | 3 | 55 | 5,007 | 1,903 | 6,910 | 1,534 | 907 | 2,441 | 2,227 | 570 | 2,797 | 9,615 | 3,661 | 13,276 | 2,081 | 7,399 |
| Northern Avenue 2..... | 14 | 7 | 21 | ..... | ..... | ..... | 202 | 21 | 233 | 38 | 6 | 44 | 64 | 16 | 80 | 318 | 60 | 378 | 51 | 173 |
| Summer Street..... | 130 | 15 | 145 | 14 | 1 | 15 | 1,515 | 154 | 1,669 | 350 | 61 | 411 | 363 | 33 | 396 | 2,372 | 264 | 2,636 | 486 | 1,520 |
| Warren..... | 75 | 54 | 129 | 38 | 5 | 43 | 782 | 208 | 990 | 340 | 122 | 462 | 1,070 | 274 | 1,281 | 2,242 | 663 | 2,905 | 524 | 1,730 |
| Totals..... | 2,543 | 882 | 3,425 | 496 | 50 | 546 | 24,302 | 6,156 | 30,458 | 6,804 | 2,879 | 9,683 | 9,214 | 1,966 | 11,180 | 43,359 | 11,933 | 55,292 | 9,778 | 28,175 |

1 Now Summer Street, over Reserved Channel.

2 Closed for repairs.

GRANITE AVENUE BRIDGE.*

| | | | | | | | |
|-----------------------|---|---|---|---|---|---|-------------------|
| Drawtenders' salaries | . | . | . | . | . | . | \$2,561 91 |
| Material | . | . | . | . | . | . | 214 95 |
| Repairs | . | . | . | . | . | . | 276 81 |
| Advertising | . | . | . | . | . | . | 15 00 |
| Supplies | . | . | . | . | . | . | 52 29 |
| | | | | | | | <u>\$3,120 96</u> |

* Maintained jointly by town of Milton and County of Suffolk.

| | STEAMERS, | | | SAILING VESSELS, | | | TUGS, | | | BARGES, | | | ALL OTHERS, | | | TOTAL NUMBER OF VESSELS, | | | Total Number of Caroes, | Total Number of Openings. |
|---------------|-----------|--------|--------|------------------|--------|--------|-------|--------|--------|---------|--------|--------|-------------|--------|--------|--------------------------|--------|--------|-------------------------|---------------------------|
| | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | Day. | Night. | Total. | | |
| Openings..... | 2 | ..... | 2 | 4 | 1 | 5 | 220 | 5 | 225 | 75 | 4 | 79 | 99 | 58 | 157 | 400 | 68 | 468 | 40 | 335 |

FERRY SERVICE.

FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31, 1934.

1. Receipts.

| | |
|---|--------------------|
| Total cash receipts during the year | \$52,242 01 |
| Cash in hands of tollmen at beginning of year | 200 00 |
| | <u>\$52,442 01</u> |
| Cash paid over to City Collector | \$51,321 50 |
| Cash in hands of tollmen December 31, 1934 | \$200 00 |
| Cash in hands of cashier December 31, 1934 | 920 51 |
| | <u>1,120 51</u> |
| | <u>\$52,442 01</u> |

2. Appropriations and Expenditures.

| | |
|---|--------------------|
| Received from annual appropriations for Ferry Service | \$334,380 94 |
| Unexpended balances from special appropriations, January 1, 1934, | \$58,435 84 |
| Appropriations from taxes for ferry improvements | 20,000 00 |
| | <u>\$78,435 84</u> |
| Expenditures | \$2,698 90 |
| Transferred to Ferry Service | 8,472 94 |
| | <u>11,171 84</u> |
| Unexpended balances of special appropriations, December 31, 1934 | <u>\$67,264 00</u> |

3. Result of Operation for the Year.

| | |
|---|-----------------------|
| Receipts for the year (net income) | \$52,242 01 |
| Ordinary expenses (maintenance appropriation) | \$334,380 94 |
| Interest paid on Ferry debt | 23,862 50 |
| Depreciation on Ferryboats | 81,433 79 |
| Decrease in value of machinery and tools | 291 74 |
| Decrease in value of Ferryboats on account of sale of Ferryboat "John H. Sullivan"† | 21,000 00 |
| | <u>460,968 97</u> |
| Net outgo for the year | 460,968 97 |
| Net loss for the year | <u>* \$408,726 96</u> |

* Does not include expenditures for special appropriations.

† Includes \$6,273.90 credited to sale of city property.

4. Balance Sheet.

End of Fiscal Year, December 31, 1934.

| ASSETS. | | LIABILITIES. | |
|---|-----------------------------|--|-----------------|
| AVAILABLE ASSETS: | | CURRENT LIABILITIES: | |
| Cash in hands of tollmen at close of year..... | \$200 00 | None. | |
| Cash in hands of cashier at close of year..... | 920 51 | | |
| INVENTORY OF SUPPLIES, VIZ.: | | | |
| Supplies for Maintenance..... | 13,526 84 | | |
| Rents receivable..... | 2,422 87 | | |
| Damages receivable..... | 325 00 | | |
| Total available assets..... | \$17,395 22 | | |
| CONTINGENT ASSETS: | | CONTINGENT LIABILITIES: | |
| City Treasurer..... | 67,264 00 | Appropriations account..... | \$67,264 00 |
| FIXED ASSETS: | | FIXED LIABILITIES: | |
| Real estate, land and buildings..... | 1610,100 00 | Capital of the city invested in the ferries, viz.: | |
| Ferry-boats ¹ | 847,362 05 | Total expenditures of all kinds for seventy- | |
| Machinery, tools, etc..... | 2,625 68 | seven years, including interest on ferry | |
| | | debt..... | \$25,898,667 89 |
| Total tangible assets..... | ² \$1,544,746 95 | Less total receipts..... | 8,801,463 06 |
| Deficiency or loss by operation and maintenance | 15,619,721 88 | | 17,097,204 83 |
| of the ferries for seventy-six years to date..... | | | |
| | \$17,164,468 83 | | \$17,164,468 83 |

¹ Original purchase.

New buildings, drops, slips, cost to 1913.....

Land, Lincoln's Wharf, cost to 1887.....

Land, Battery Wharf, cost to 1893.....

New drops, both ferries, cost from 1923 to

December 31, 1934.....

² Assessors' figures.³ Total cost to date, per ferry books.....

Less boats sold, depreciated or destroyed.....

\$2,529,820 50

1,682,458 45

\$847,362 05

\$899,461 16

886,648 44

\$1,786,109 60

Balance Sheet for Year 1934.

Assets.

| | |
|--|---------------------------|
| Cash in hands of cashier | \$920 51 |
| Cash, tollmen's capital | 200 00 |
| Rents receivable | 2,422 87 |
| Supplies in stock | 13,526 84 |
| City Treasurer (balance of appropriation) | 67,264 00 |
| Ferryboats (less depreciation) | 847,362 05 |
| Machinery and tools | 2,625 68 |
| Real estate, land and buildings (assessors' valuation) | 610,100 00 |
| Damage receivable | 325 00 |
| Total tangible assets | <u>\$1,544,746 95</u> |
| Cost of avenues, etc., East Boston (previous to 1871) | ¹ \$315,815 68 |
| Deficiency of assets (loss) | 15,303,906 20 |
| Totals | <u>\$17,164,468 83</u> |

Liabilities.

| | |
|--|------------------------|
| Capital invested by City of Boston to date | \$17,097,204 83 |
| Appropriations account (credit balances) | 67,264 00 |
| Total liabilities | <u>\$17,164,468 83</u> |

Details of Capital Invested by the City of Boston.

| | |
|---|------------------------|
| Total expenditures to date per ferry books | \$25,567,269 04 |
| Interest of debt for the year (per City Auditor's reports), | 23,862 50 |
| Interest, previous years, etc. (net debits, per City Auditor's reports) | 307,536 35 |
| Total expenditures | <u>\$25,898,667 89</u> |
| Deduct total receipts paid to City Collector | 8,801,463 06 |
| Excess expenditures, capital | <u>\$17,097,204 83</u> |

COMPARISON OF RECEIPTS, APPROPRIATIONS AND EXPENDITURES.

Receipts.

| | |
|--|--------------------|
| From foot passengers (tollmen) | \$13,633 57 |
| From foot passengers (office sales) | 106 10 |
| From extra passengers on teams (gatemen) | 294 14 |
| From team tickets (office sales) | † 3,170 40 |
| From strip team tickets (tollmen) | 7,448 80 |
| From cash for teams (gatemen) | 27,257 50 |
| Total from rates | <u>\$51,910 51</u> |
| From rents | 80 00 |
| From other sources | 251 50 |
| Total ordinary receipts | <u>\$52,242 01</u> |

¹ Included in deficiency of assets in Balance Sheet.

† Includes sales of coupons to city departments.

Expenditures (Ordinary).

Office:

| | |
|-----------------------------------|------------|
| Division engineer's salary (part) | \$1,327 43 |
| General foreman and cashier | 1,727 27 |
| Clerk-assistant cashier | 1,409 24 |
| Retired veterans' pensions | 6,429 25 |
| Retired employees' pensions | 788 00 |
| Medical inspector (part) | 90 00 |
| Stationery | 168 60 |
| Printing | 729 25 |
| Telephones | 337 52 |
| Advertising | 51 00 |
| Car fares | 331 46 |
| Postage | 4 50 |
| Premiums, surety companies | 185 00 |

| | |
|------------------------|--------------------|
| Total, office expenses | <u>\$13,578 52</u> |
|------------------------|--------------------|

Ferryboats and landings:

| | |
|---------------------------------------|--------------|
| Employees (wages) | \$226,311 85 |
| Fuel | 45,810 35 |
| Teaming, weighing coal, etc. | 2,814 75 |
| Supplies | 9,800 09 |
| Gas | 63 80 |
| Oil | 1,517 78 |
| Electric light | 3,094 77 |
| Electric power | 1,348 00 |
| Repairs of boats | 17,481 30 |
| Repairs of buildings, drops and piers | 5,512 15 |
| Furnishings | 32 90 |
| Other expenditures | 7,014 68 |

| | |
|-------|---------------------|
| Total | <u>\$334,380 94</u> |
|-------|---------------------|

RECEIPTS, APPROPRIATIONS AND EXPENDITURES.

Expenditures from Special Appropriations.

| | |
|--------------------------|----------|
| Ferry improvements, etc. | 2,698 90 |
|--------------------------|----------|

| | |
|---|---------------------|
| Total expenditures, regular and special | <u>\$337,079 84</u> |
|---|---------------------|

| | |
|--------------------------------|--------------------|
| Balance in treasury unexpended | <u>\$67,264 00</u> |
|--------------------------------|--------------------|

Appropriations.

| | |
|-------------------------------|---------------------|
| Regular annual appropriations | <u>\$334,380 94</u> |
|-------------------------------|---------------------|

Total Expenditures upon Ferries Since 1858.

| | |
|---|--------------|
| Expenditures for avenues, paving, interest, etc., previous to the purchase of the ferries by the city | \$444,101 30 |
| Purchase of the ferries, April, 1870 | 276,375 00 |
| Expenditures for ferryboats since April, 1870, | 2,530,009 51 |
| Expenditures for new buildings, piers, drops, etc. | 1,491,468 89 |
| Expenditures for tools and fixtures (prior to 1910) | 14,752 46 |

| | |
|-----------------|-----------------------|
| Carried forward | <u>\$4,756,707 16</u> |
|-----------------|-----------------------|

| | |
|---|------------------------|
| <i>Brought forward</i> | \$4,756,707 16 |
| Expenditures for land for Lincoln's Wharf in 1887 | 5,562 52 |
| Expenditures for land for Battery Wharf in 1893 | 10,000 00 |
| Total expenditures on capital account | \$4,772,269 68 |
| Expenditures for repairs of all kinds | 2,857,514 01 |
| Expenditures for fuel | 3,041,247 25 |
| Expenditures for salaries and wages | 11,937,858 75 |
| Expenditures for all other purposes | 3,289,778 20 |
| | <u>\$25,898,667 89</u> |

Total Receipts from Ferries Since 1858-59.

| | |
|---|-----------------------|
| Receipts from rents, etc., previous to purchase of ferries | \$29,588 56 |
| Receipts from ferry tolls since purchase of ferries | 8,464,550 84 |
| Receipts from rents since purchase of ferries, | 73,142 40 |
| Receipts from sale of ferryboats | 168,004 57 |
| Receipts from all other sources, per ferry books | 36,562 35 |
| Receipts from all other sources, additional, per City Auditor | 30,734 85 |
| Total receipts from all sources | \$8,802,583 57 |
| Less amount with tollmen as capital \$200 00 | |
| Less amount in hands of cashier at close of year 920 51 | |
| | <u>1,120 51</u> |
| Total receipts, Auditor's report | <u>\$8,801,463 06</u> |

Regular Annual (Ordinary) and Special Appropriations (Extraordinary) of the Ferry Service for the Year Ending December 31, 1933.

| | |
|--|---------------------|
| Appropriations (regular) for the year ending December 31, 1933 | <u>\$334,380 94</u> |
| Amount of expenditures (regular) for the year | <u>\$334,380 94</u> |

SPECIAL APPROPRIATIONS.

East Boston Ferry, two additional boats and other permanent improvements:

| | |
|--|------------------|
| Unexpended balance January 1, 1934 | \$53,889 42 |
| Unexpended balance December 31, 1934 | <u>53,889 42</u> |

Ferry Improvements:

| | | |
|--|------------|--------------------|
| Unexpended balance January 1, 1934 | | \$4,546 42 |
| Appropriations from taxes | | 20,000 00 |
| Total | | <u>\$24,546 42</u> |
| Expenditures for year 1934 | \$2,698 90 | |
| Transferred to Ferry Service | 8,472 94 | |
| | | <u>\$11,171 84</u> |
| Unexpended balance December 31, 1934 | | <u>\$13,374 58</u> |

Expenditures for year made up as follows:

Amount paid to Skinner Sherman, Inc.:

To one day of inspector's time witnessing shipment of
creosoted pavement slabs for ferry drops \$23 65

Amount paid to Roy B. Rendle Company:

Work done and material furnished on removing and
replacing head of middle pier and other repairs South
Ferry, East Boston 2,675 25

\$2,698 90

RECEIPTS OF SOUTH FERRY.

| FROM TOLLMEN. | From Foot Passengers. | From Tickets. | Totals. |
|-----------------------|--------------------------|------------------|-------------|
| Boston side..... | \$6,913 71 | \$4,572 00 | \$11,485 71 |
| East Boston side..... | 6,719 86 | 2,876 80 | 9,596 66 |
| Totals..... | \$13,633 57 | \$7,448 80 | \$21,082 37 |

From tollmen \$21,082 37

From gatemen:

29,414 foot passengers at 1 cent, \$294 14
Cash for teams 27,257 50

27,551 64

Total at South Ferry \$48,634 01

Tickets paid for at ferry office 3,106 50

Tickets sold and paid for through City Col-
lector's office 170 00

Total from rates \$51,910 51

Rents for the year 80 00

Headhouse privileges 100 00

Care of public telephone booths 48 00

Commission on public telephones 68 50

Sales of miscellaneous junk 35 00

Total receipts for the year \$52,242 01

TRAVEL ON THE SOUTH FERRY FROM JANUARY 1, 1934,
TO DECEMBER 31, 1934, INCLUSIVE.

| | | |
|--|------------------|----------------|
| Foot passengers at 1 cent each | 1,392,771 | |
| Foot passengers by tickets | 11,905 | |
| Total foot passengers | <u>1,404,676</u> | |
| Handcart, or wheelbarrow and man | 5 cents | } 58,742 |
| Horse and rider | 5 cents | |
| Horse and cattle, each with attendant | 5 cents | |
| One or two horse vehicle with driver | 5 cents | |
| Motorcycle with driver | 5 cents | } 169,791 |
| Trailer | 10 cents | |
| Three or four horse vehicle with driver | 10 cents | |
| Passenger automobile with driver and one passenger, | 10 cents | |
| Passenger automobile with driver and more than one passenger | 15 cents | } 140,242 |
| Motor truck, six tons or less, with driver | 15 cents | |
| Motor truck, over six tons, with driver | 20 cents | } 10,673 |
| Auto bus with driver | 20 cents | |
| Auto bus with driver and passengers | 30 cents | 24 |
| | | <u>379,472</u> |

Motor Vehicle Traffic (Reports of Captains).

January 1, 1934, to December 31, 1934.

| | |
|--------------------------|------------------|
| Passenger cars | 273,591 |
| Trucks | 99,220 |
| Totals | <u>* 372,811</u> |

Changes in rates of tolls on city ferryboats were made during the year 1930. The first rate, effective January 1, was superseded on April 1, 1930, by the rates which are now effective, and are as follows:

PASSENGERS.

On and after April 1, 1930, the tolls on the East Boston Ferries will be as follows:

| | |
|---------------------------|---------|
| Foot passengers | 1 cent. |
|---------------------------|---------|

VEHICLES.

| | |
|--|-----------|
| One or two horse vehicle with driver | 5 cents. |
| Motorcycle with driver | 5 cents. |
| Trailer | 10 cents. |
| Three or four horse vehicle with driver | 10 cents. |
| Passenger automobile with driver and one passenger, | 10 cents. |
| Passenger automobile with driver and more than one passenger | 15 cents. |

* Including 10,908 free.

| | |
|--|-----------|
| Motor truck, six tons or less, with driver | 15 cents. |
| Motor truck, over six tons, with driver | 20 cents. |
| Auto bus with driver | 20 cents. |
| Auto bus with driver and passengers | 30 cents. |

MISCELLANEOUS.

| | |
|---|----------|
| Hand cart, or wheelbarrow and man | 5 cents. |
| Horse and rider | 5 cents. |
| Horse and cattle, each with attendant | 5 cents. |

TICKETS FOR VEHICLES.

Tickets in books of ten to be sold at a reduction of 20 per cent.

FUNERAL PROCESSIONS.

Funeral processions pass free of tolls.

SUMNER TRAFFIC TUNNEL.

*Financial Statement for the Year Beginning June 30, 1934,
and Ending December 31, 1934.*

| | |
|--|---------------------|
| Total cash receipts | * \$274,658 13 |
| Cash turned over to City Collector | \$270,000 00 |
| Cash in hands of cashier December 31, 1934 | 4,658 13 |
| | <u>\$274,658 13</u> |

Appropriations and Expenditures.

| | |
|---|---------------------|
| Received from annual appropriations for Sumner Traffic Tunnel | \$233,286 78 |
| Ordinary expenditures (Maintenance) | † \$222,364 68 |
| Unexpended balance December 31, 1934 | 10,922 10 |
| | <u>\$233,286 78</u> |

* Includes cash in hands of cashier at close of Collector's Office, December 31, 1934.

† Does not include interest on Tunnel debt.

APPENDIX B.

REPORT OF THE DIVISION ENGINEER OF THE
HIGHWAY DIVISION.

BOSTON, January 2, 1935.

MR. CHRISTOPHER J. CARVEN,
Commissioner of Public Works.

DEAR SIR,—I respectfully submit the following report of the operation and expenditures of the Highway Division which consists of the Street Lighting and Paving Service for the year ending December 31, 1934.

The maintenance expenditures of the Division for the year are as follows:

| | |
|----------------------------|----------------|
| Lighting Service | \$990,322 41 |
| Paving Service | 1,015,212 53 |
| Total | \$2,005,554 94 |

Under the loan and grant of the Federal Public Works Administration for reconstruction of streets the sum of \$360,022.45 was expended on the following-named streets:

Alford street; Ashmont street; Southampton street; Adams street; Old Colony avenue, Dorchester avenue to Dorchester street and Dorchester street to Mount Vernon street; Woodrow avenue; La Grange street, Centre street to Vermont street.

From the "Highways, Making of," loans there was expended \$159,454.60.

The list of streets done under this appropriation consisted of nineteen new streets. The construction of seven of these streets was carried over from 1933 and finished in 1934.

From the Appropriation for "Reconstruction of Streets" the expenditure was \$180,665.14. One contract was awarded for repairing streets having an asphalt or bitulithic pavement on which the maintenance guarantee had expired. No contract was awarded in the first district as repairs were made by the Paving Forces with material from the Paving Service Plant in Brighton.

Under this appropriation there was constructed a heavy retaining wall in Adams street, Dorchester, in front of the Cedar Grove Cemetery. Six streets in various sections had new construction of artificial stone sidewalks.

In addition to the work of construction done by contract and special appropriation the Paving Service Forces were employed in the maintenance of the public streets throughout the city, resurfacing macadam roadways, repairing old granite paved streets and the patching of old street surfaces, whatever the character, with gravel, brick and artificial sidewalk repairs.

In nearly all the suburban districts all street surface and gutter cleaning was done by the Paving District Forces. Details of men sent from the Public Welfare Department assisted in the regular work of the Division.

Since November, 1933, a large amount of maintenance work has been accomplished by the Federal Emergency Relief Administration. The importance and size of this work cannot be embodied in the annual report of the Highway Division. It is so extensive that reference can only be made to the fact that it is shown very thoroughly and in complete detail in the publication of the *City Record*, volume 26, No. 52, issued Saturday, December 29, 1934.

LIGHTING SERVICE.

The opening of the East Boston Vehicular Tunnel required new street lighting installations in and about the street widenings leading from the Haymarket Square Traffic Circle to the tunnel entrance.

In Haymarket square four new arc lamps were installed and seven arc lamps were relocated; on Merrimac street, two new lamps were installed and on Cross street, nine arc lamps were installed.

In the Prado opposite Old Christ's Church and St. Stephen's Church, six new mazda lamps of 600 candle power on the new type of concrete post were installed. Similar installation to the number of thirteen lamps were set up in Woodrow avenue, Dorchester, in connection with the street reconstruction made by the Public Works Administration.

Thirteen new mazda lamps, 600 candle power, were set up in Melville avenue, Dorchester.

A considerable number of new 80 candle power lamps were installed throughout the several suburban districts of the city.

Respectfully,

JOSHUA ATWOOD,
Division Engineer.

HIGHWAY DIVISION — PAVING SERVICE.

Work Done by Contract in 1934.

| | Old Work. | New Work. | Total Old and New Work. |
|--|----------------------|-----------------------|----------------------------|
| Edgestone set on gravel foundation..... | 20,610 linear feet. | 19,232 linear feet. | 39,842 linear feet. |
| Edgestone set on crushed stone foundation..... | 593 " " | 13,679 " " | 14,272 " " |
| Concrete base laid..... | 2,088 square yards. | 153,006 square yards. | 155,094 square yards. |
| Granite blocks relaid, gravel joints..... | 8 " " | ..... | 8 " " |
| Recut granite blocks, recut and laid grout joints..... | ..... | 13,031 square yards. | 13,031 " " |
| Recut granite blocks, hauled and laid, grout joints..... | ..... | 598 " " | 598 " " |
| Old granite blocks laid, grout joints..... | 13,908 square yards. | 244 " " | 14,152 " " |
| Second-hand granite blocks, hauled and laid, grout joints..... | ..... | 36 " " | 36 " " |
| Asphalt and binder laid..... | ..... | 82,751 " " | 82,751 " " |
| Bitulithic pavement laid..... | 34 square yards. | 45,923 " " | 45,957 " " |
| Brick block gutter, grout joints..... | 180 " " | ..... | 180 " " |
| Bituminous patching contract: | | | |
| 1. Bituminous wearing surface and binder..... | 5,277 " " | 4,770 square yards. | 10,047 " " |
| 2. Bituminous concrete wearing surface..... | 16,583 " " | ..... | 16,583 " " |
| 3. Bituminous surface patching..... | 11,389 " " | ..... | 11,038 " " |
| 5. Concrete base..... | 106 " " | 162 square yards. | 268 " " |
| 6. Covers reset..... | 2 " " | ..... | 2 " " |
| Bituminous macadam..... | ..... | 5,243 square yards. | 5,243 " " |

| | | | | |
|--|--------|---------------|--------|---------------|
| Bituminous concrete | 4,279 | " | 4,279 | " |
| Extra binder | 23 | tons, | 23 | tons, |
| Artificial stone sidewalks laid | 2,085 | square yards, | 37,675 | square yards, |
| One-course concrete sidewalks laid | 5,752 | " | 5,752 | " |
| Brick sidewalks laid | 294 | square yards, | 294 | " |
| Gravel sidewalks graded | 4,631 | square yards, | 4,873 | " |
| Asphalt concrete sidewalk laid | 1,466 | " | 1,466 | " |
| Earth excavation | 26,436 | cubic yards, | 26,436 | cubic yards, |
| Rock excavation | 373 | " | 373 | " |
| Filling furnished | 115 | " | 115 | " |
| Gravel foundation (6 inches) | 5,306 | square yards, | 5,306 | square yards, |
| Crushed stone furnished | 412 | tons, | 412 | tons, |
| Concrete base removed | 2,760 | square yards, | 2,760 | square yards, |
| Loam graded and seeded | 1,278 | " | 1,278 | " |
| Covers reset | 777 | | 777 | |
| Sign posts set or reset | 37 | | 37 | |
| Iron fence erected | 587 | linear feet, | 587 | linear feet, |
| Chain link fence erected | 228 | " | 228 | " |
| Wooden fence erected | 1,778 | " | 1,778 | " |
| Ground water drain laid | 9,841 | " | 9,841 | " |
| Dry wells constructed | 10 | | 10 | |
| Edgestone foundation at driveways placed | 2,818 | linear feet, | 2,818 | linear feet, |

Work Done by Contract in 1934.—Concluded.

| | Old Work. | New Work. | Total Old and New Work. |
|-----------------------------------|-----------|------------------|----------------------------|
| Extra concrete furnished..... | | 227 cubic yards. | 227 cubic yards. |
| Old granite wall removed..... | | 27 " " | 27 " " |
| Steel furnished..... | | 53,946 pounds. | 53,946 pounds. |
| Concrete cap for wall placed..... | | 430 linear feet. | 430 linear feet. |
| Concrete wall built..... | | 540 cubic yards. | 540 cubic yards. |
| Dry wall built..... | | 512 " " | 512 " " |
| Mortar wall built..... | | 870 " " | 870 " " |

NOTE.— Old work means same type of pavement, base, etc., being replaced or edgestone reset. New work means pavement, base, etc., as shown being laid for the first time, including all incidental work.

Work Done by Paving Forces During 1934.

| | Old Work. | New Work. | Total Old and New Work. |
|--|---------------------|-------------------|----------------------------|
| Concrete base laid..... | 1,266 square yards. | ..... | 1,266 square yards. |
| Roadway, granite block, gravel joints..... | 10,338 " " | 676 square yards. | 11,014 " " |
| Roadway, granite block, grout joints..... | 24,583 " " | 2,678 " " | 27,261 " " |
| Gutter, granite block, gravel joints..... | 8,445 " " | 15 " " | 8,460 " " |
| Gutter, granite block, grout joints..... | 4,176 " " | 259 " " | 4,435 " " |
| Flagging crosswalk, gravel joints..... | 258 " " | ..... | 258 " " |

| | | | | | |
|--|---------------------|---|---|----------------------|------------------------|
| Roadway, wood block, sand joints..... | 134 | " | " | 134 | " |
| Macadam surface patch..... | 221,284 | " | " | 221,284 | " |
| Asphalt blanket coat..... | 3,629 | " | " | 3,629 | " |
| Sheet asphalt surface patch..... | 2,944 | " | " | 2,944 | " |
| Grading, no pavement laid..... | 6,523 | " | " | 6,523 | " |
| Cobble gutters repaired..... | 4 | " | " | 4 | " |
| Brick sidewalks laid..... | 36,708 | " | " | 36,755 | " |
| Artificial stone sidewalks laid..... | 56,622 | " | " | 56,622 | " |
| Gravel or crushed stone sidewalks surfaced..... | 52,810 | " | " | 52,810 | " |
| Tar sidewalks patched..... | 2,460 | " | " | 2,460 | " |
| Asphalt penetration, macadam surface placed..... | | | | 69,209 square yards, | " |
| Edgestone set..... | 25,246 linear feet | | | 813 linear feet, | 26,059 linear feet, |
| Fence repaired..... | 245 | " | " | | 245 |
| Sidewalk excavating, no sidewalks laid..... | | | | 870 cubic yards, | 870 cubic yards, |
| Roadway excavating, no roadway constructed..... | | | | 830 | 830 |
| Roadway excavating, roadway changed..... | 44,654 cubic yards, | | | | 44,654 |
| Rock excavating..... | | | | 440 cubic yards, | 440 |
| Snow removed..... | | | | | 221,688 |
| New style sign posts erected..... | | | | 54 units, | 54 units, |
| Street cleaning..... | | | | | 1,296,767 cubic yards, |

STREET OPENINGS.

Under Classes 1 and 2 of the schedule of permit fees permits were issued for openings in public ways, as follows:

| | Number of Permits. |
|---|--------------------|
| Sewer and Water Service | 4,168 |
| Edison Company | 909 |
| Miscellaneous | 1,305 |
| Boston Consolidated Gas Company | 359 |
| Emergency permits | 1,668 |
| New England Telephone Company | 338 |
| Boston Elevated Railway | 110 |
| Dedham and Hyde Park Gas and Electric Company | 8 |
| | <hr/> 8,865 |

Permits for other than street openings have been issued as follows:

| | |
|--|-------------|
| Painting and minor repairs | 2,541 |
| Placing signs flat on buildings | 463 |
| Special permits | 281 |
| Erecting and repairing buildings | 288 |
| Erecting and repairing awnings | 169 |
| Emergency permits for raising and lowering | 65 |
| Moving buildings in streets | 10 |
| Cleaning snow from roof | 18 |
| | <hr/> 3,835 |
| Total of all permits issued | 12,700 |

The fees received from these permits amounted to \$10,022.06; of this amount \$7,466.06 was deposited with the City Collector and \$2,556 was billed to public service corporations.

BONDS.

There are now on file 2,219 surety bonds, in amount of one, three and twenty thousand dollars, covering the city against claims for damages, etc., through the use of permits.

TABLE SHOWING LENGTH AND AREA OF PAVING ON ACCEPTED STREETS, CORRECT TO JANUARY 1, 1935.

| | LENGTH IN MILES. | | | | | | | | | | | AREA IN SQUARE YARDS. | | | | | | | | | | |
|-----------------------|------------------|-------------------|----------------|-------------|-------------------|--------|-----------|----------|---------|-------------|---------|-----------------------|-------------------|----------------|-------------|-------------------|--------|------------|-------------|-----------|-------------|------------|
| | Sheet Asphalt. | Asphalt Concrete. | Granite Block. | Wood Block. | Plank on Bridges. | Brick. | Concrete. | Macadam. | Gravel. | Not Graded. | Totals. | Sheet Asphalt. | Asphalt Concrete. | Granite Block. | Wood Block. | Plank on Bridges. | Brick. | Concrete. | Macadam. | Gravel. | Not Graded. | Totals. |
| Year 1933 report..... | 130.69 | 124.06 | 89.37 | 2.41 | 0.81 | 0.97 | 9.04 | 289.90 | 25.35 | 2.00 | 674.60 | 2,474,376 | 2,553,121 | 2,379,843 | 53,409 | 17,920 | 22,435 | 154,477 | 4,746,889 | 393,013 | 59,129 | 12,854,612 |
| Per Cent..... | 19.37 | 18.39 | 13.25 | 0.36 | 0.12 | 0.14 | 1.34 | 42.97 | 3.76 | 0.30 | 100.00 | 19.25 | 19.86 | 18.52 | 0.41 | 0.14 | 0.17 | 1.20 | 36.93 | 3.06 | 0.46 | 100.00 |
| JANUARY 1, 1935. | | | | | | | | | | | | | | | | | | | | | | |
| City Proper..... | 33.07 | 21.92 | 31.61 | 1.33 | 0.16 | 0.40 | 1.00 | 7.56 | 0.03 | ..... | 97.08 | 655,281 | 517,686 | 768,474 | 29,461 | 4,058 | 9,776 | 7,552 | 116,799 | 1,150 | ..... | 2,110,237 |
| Charlestown..... | 0.69 | 1.42 | 10.28 | 0.08 | 0.07 | ..... | 0.78 | 10.07 | ..... | ..... | 23.39 | 10,218 | 23,460 | 245,729 | 2,011 | 1,999 | ..... | 18,751 | 146,250 | ..... | ..... | 448,418 |
| East Boston..... | 3.86 | 3.24 | 6.03 | 0.01 | 0.06 | 0.04 | 0.44 | 21.52 | 0.19 | 0.04 | 35.43 | 86,615 | 76,130 | 139,076 | 187 | 854 | 771 | 16,475 | 447,253 | 3,800 | 865 | 772,026 |
| South Boston..... | 7.86 | 3.97 | 14.75 | 0.61 | 0.19 | 0.12 | 0.12 | 16.96 | 0.58 | 1.30 | 46.46 | 149,639 | 95,121 | 364,859 | 10,420 | 4,797 | 3,004 | 3,642 | 301,706 | 9,675 | 34,550 | 977,413 |
| Roxbury..... | 25.61 | 12.64 | 14.37 | 0.10 | 0.04 | 0.14 | 0.75 | 39.16 | 1.28 | ..... | 94.09 | 455,773 | 257,536 | 378,671 | 3,778 | 1,022 | 3,387 | 15,546 | 579,446 | 16,604 | 61 | 1,711,824 |
| West Roxbury..... | 20.81 | 29.20 | 3.65 | 0.02 | 0.07 | ..... | 2.31 | 69.07 | 3.59 | 0.32 | 129.04 | 359,995 | 580,449 | 173,342 | 429 | 1,447 | ..... | 33,167 | 1,084,098 | 55,679 | 11,608 | 2,300,214 |
| Dorchester..... | 31.49 | 29.58 | 7.43 | 0.12 | 0.07 | 0.27 | 1.81 | 83.01 | 3.64 | ..... | 157.42 | 596,461 | 563,151 | 218,609 | 3,254 | 1,346 | 5,493 | 30,591 | 1,326,697 | 53,180 | 1,995 | 2,802,777 |
| Brighton..... | 11.19 | 20.54 | 0.65 | 0.04 | 0.08 | ..... | 2.27 | 22.94 | 2.60 | ..... | 60.31 | 255,854 | 416,605 | 75,469 | 2,177 | 1,231 | ..... | 45,301 | 384,705 | 38,328 | 3,611 | 1,223,281 |
| Hyde Park..... | 0.35 | 4.22 | 0.05 | 0.10 | 0.05 | ..... | 0.29 | 19.33 | 11.39 | 0.24 | 36.02 | 5,622 | 92,812 | 12,572 | 1,692 | 747 | ..... | 7,056 | 336,826 | 174,166 | 7,919 | 639,412 |
| Total..... | * 134.93 | † 126.73 | ‡ 88.82 | 2.41 | 0.79 | 0.97 | \$ 9.77 | 289.62 | 23.30 | 1.90 | 679.24 | * 2,575,458 | † 2,622,950 | ‡ 2,376,801 | 53,409 | 17,501 | 22,431 | \$ 178,081 | † 4,723,780 | ‡ 354,582 | 60,609 | 12,985,602 |
| Per Cent..... | 19.86 | 18.66 | 13.08 | 0.35 | 0.12 | 0.14 | 1.44 | 42.64 | 3.43 | 0.28 | 100.00 | 19.83 | 20.20 | 18.30 | 0.41 | 0.14 | 0.17 | 1.37 | 36.38 | 2.73 | 0.47 | 100.00 |

TOTAL PUBLIC STREETS 679.14 MILES.

NOTE.—In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline is included in city proper.

* Of this amount 0.10 mile, or 834 square yards, is Bitumastic; and 0.08 mile, or 1,323 square yards is Kyrock; and 0.02 mile, or 470 square yards, is Unionite.

† Of this amount 0.02 mile, or 667 square yards, is Amiesite; and 9.05 miles, or 181,643 square yards, is asphalt concrete; and 105.24 miles, or 2,188,448 square yards, is bitumastic; and 0.00 mile, or 4,139 square yards, is Colprovia; and 0.06 mile, or 959 square yards, is Fibertine; and 0.00 mile, or 4,000 square yards, is Hepburnite; and 0.00 mile, or 3,963 square yards, is Laykold; and 0.00 mile, or 4,167 square yards, is Macasphalt; and 0.26 mile, or 5,825 square yards, is Simasco; and 11.73 mile, or 217,375 square yards, is

Topeka; and 0.00 mile, or 4,153 square yards, is Warcolite; and 0.17 mile, or 3,270 square yards, is Carey Elastite asphalt plank; and 0.16 mile, or 3,347 square yards, is Flintkote asphalt plank; and 0.04 mile, or 854 square yards, is Johns Manville asphalt plank.

‡ Of this amount 0.02 mile, or 181 square yards, is cobble; and 57.66 miles, or 1,770,702 square yards, is granite block paving on concrete base.

\$ Of this amount 0.06 mile, or 924 square yards, is Blome granitoid concrete block.

§ Of this amount 158.14 miles, or 2,711,955 square yards, is bituminous macadam.

6.51 miles, or 34,532 square yards, public alleys included in this table; 7.55 miles, or 332,770 square yards, public streets in charge of Park Department included in this table; 3.42 miles, or 97,765 square yards, public streets in charge of Commonwealth of Massachusetts included in this table. In addition to this table there are 1.67 miles, or 8,364 square yards, of accepted footways.

APPENDIX C.

REPORT OF THE DIVISION ENGINEER OF
THE SANITARY DIVISION.

BOSTON, January 2, 1935.

MR. C. J. CARVEN,
Commissioner of Public Works.

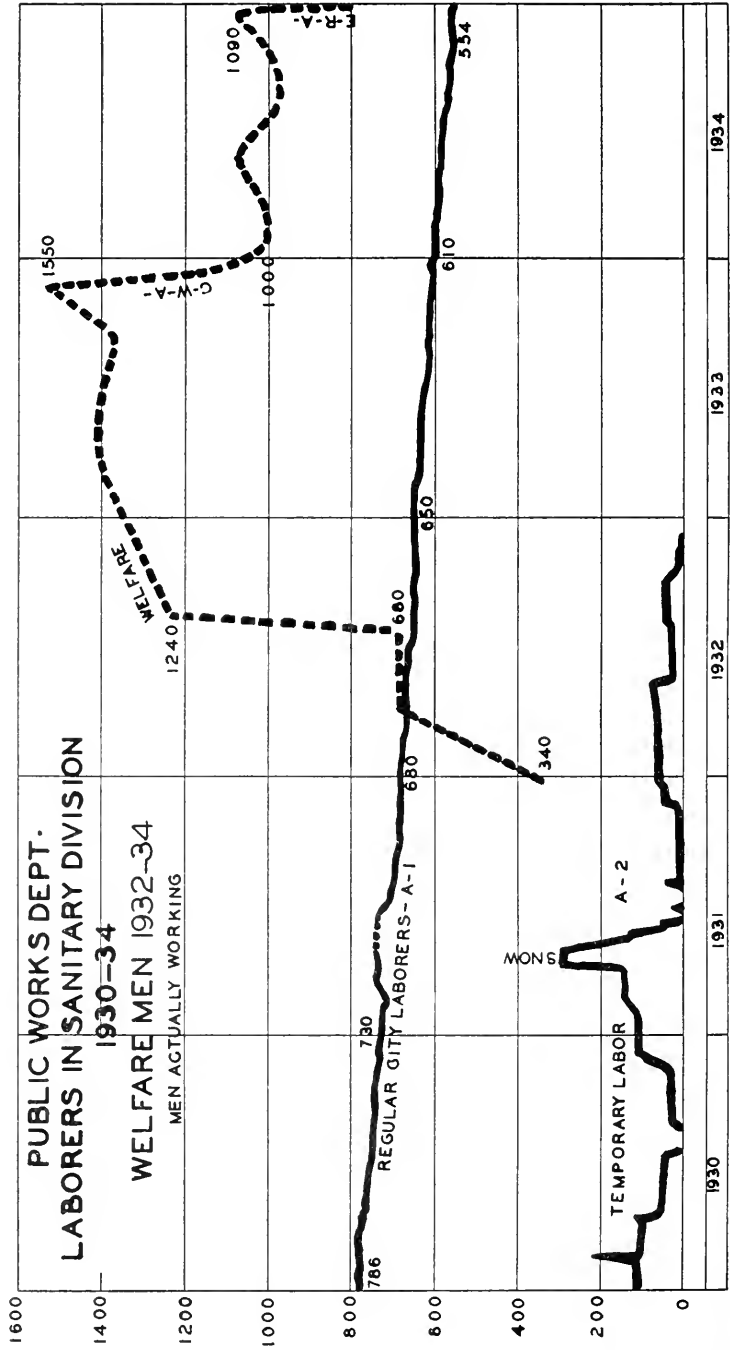
DEAR SIR,—I submit herewith a statement of the activities and expenditures of the Sanitary Division for the year ending December 31, 1934:

| | |
|---|----------------|
| Maintenance expenditures | \$2,224,258 90 |
| Distributed as follows: | |
| I. Waste collection and disposal | 1,569,231 99 |
| (a) By contract (Table III) | \$410,120 83 |
| (b) By day labor (Table IV) | 1,159,111 16 |
| II. Street Cleaning (Table VII) | 590,562 42 |
| III. Not directly chargeable to 1934 operation | 64,464 49 |
| (a) Excess over ten-year average of disposal contract | 22,000 00 |
| (b) For other services | 26,477 75 |
| (c) Pensions and annuities | 9,838 72 |
| (d) Injured rolls | 4,689 20 |
| (e) E. R. A. | 533 50 |
| (f) Unused stock | 925 32 |

Personnel changes in permanent force:

| | |
|--|-----|
| Total personnel, January 1, 1934 | 918 |
| Transfers from other departments and divisions | 18 |
| Appointments | 7 |
| | — |
| | 25 |
| | 943 |
| Deaths | 23 |
| Resignations | 8 |
| Retirements | 19 |
| Transferred out | 15 |
| Discharged | 12 |
| | — |
| | 77 |
| | 866 |

Personnel January 1, 1935, being a net loss of fifty-two men.



Man Power.— The attached graph shows the decrease in the number of laborers employed in the Sanitary Division which fell during the year 1934 from 610 to 554.

Many other cities have refused to employ Welfare men on this kind of work and have therefore kept up their regular forces. In Boston, on the other hand, this continual loss of men has been made up largely by the use of Welfare men, which, as can be seen, reached a peak of 1,550 men per day at the end of 1933, but transfers to C. W. A. at the end of the year reduced the number of men supplied to the Sanitary Division to 1,000.

We have been operating with an average of this number of Welfare men during the year 1934 until the last week, when due to the E. R. A. the number of these men fell to 800, which is insufficient to keep up the work. Unless there is an immediate increase we may anticipate complaints in 1935. It should be borne in mind that in order to produce an average of 1,000 Welfare men each day 4,000 individuals will be required, because they work on an average of one and one-half days per week.

It will be noted that during the years 1930 to 1932, inclusive, it was necessary to augment the regular city laboring forces by the employment of temporary labor. Since 1932 none have been so employed, but with any further reduction in the number of Welfare men a critical point will be reached at which it will be necessary either to replenish our regular city laboring force with more men or to employ temporary labor, or both.

Miscellaneous.— During the year land and buildings occupied by the West End stable was sold and the horses and equipment of this division were removed to the South stable at 650 Albany street, and the East Boston stable was transferred from the jurisdiction of the Highway Division to the Sanitary Division.

A dangerous water-filled quarry near South Hunting-ton avenue was improved by arrangement with the owners and filled with ashes and other refuse material. In Hyde Park considerable land was made at Smith Field Playground for the Park Department by arrangement with the contractor in that district. Both of these projects were attended by a saving in hauling distance.

Government Projects.— Under C. W. A. considerable painting of carts, trucks and miscellaneous vehicles was performed and later completed under E. R. A.

Under the C. W. A. 107 carts, forty-six trucks, twenty-one miscellaneous vehicles, twenty-three plows and part of the steel work under the Albany Street Station was done, and in an extension of this project there were painted nineteen carts, two sweepers, two flushers, part of the Sanitary stable and the roof trusses at Victory road in part. Under the E. R. A. there were two projects, one at Albany street, consisting of painting fourteen carts, one sweeper and five trucks and the completion of the stable. The other was the completion of the painting of the trusses at Victory road previously mentioned as started under C. W. A.

Comparisons Valueless.—Any attempt to draw conclusions as to the progress or efficiency of the Sanitary Division which is based upon a comparison of the expenditures of this year with any previous year will prove of no value for many reasons, some of the more important being listed below.

A comparison of the personal service items shows a drop in the pay rolls of some \$230,000 as compared with 1933. This is due to the following reasons:

(a) The 5, 10 and 15 per cent pay cut which operated for a nine-months, period in 1933 and reduced the pay of the direct labor from \$30 to \$27 a week was continued in 1934 for the whole twelve months of the year.

(b) The five-day week reducing the laborers' pay from \$27 to \$22.50 a week was in effect for twenty-four weeks of the year.

(c) Payless furloughs for salaried employees for twenty-two days.

(d) Loss of fifty-two permanent employees for various reasons.

(e) No charge has been made for the use of Welfare labor in any year, as we have been advised by experts that no factor of relative efficiency has been or ever can be established. All we can state is that the average number of Welfare men was about two-thirds of what it was in 1933.

(f) The expenditure for the contracts for the collection of waste was \$14,781 less than in 1933.

From the above it can be seen that any attempt to compare this year with last year on a dollar basis can only result in confusion and fruitless controversy.

Respectfully yours,

ADOLPH J. POST, *Division Engineer.*

TABLE I.

| Complaint Analysis, 1934. | Number. | Per Cent. |
|--|--------------|---------------|
| No excuse | 2,237 | 49.9 |
| Breakdown of vehicle | 50 | 0.10 |
| Special | 147 | 3.2 |
| Miscellaneous | 123 | 2.8 |
| Total justified | 2,557 | 56.0 |
| Not out | 190 | 4.7 |
| Inaccessible | 320 | 7.2 |
| Wrong address | 85 | 1.9 |
| Frozen | 192 | 4.2 |
| Snow | 484 | 10.4 |
| Total unjustified | 1,271 | 28.4 |
| Total complaints | 3,828 | |
| Request for removal of dead animals | 709 | 15.6 |
| Total Central Office complaints and requests | <u>4,537</u> | <u>100.00</u> |

NOTE.— The large number of complaints shown above compared with the previous year is due to unusual snow conditions in the first three months of the year, and in order to obtain a fair comparison the following adjustment has been made:

Deducting January, February and March complaints from the 1934 total, we get 2, 280 for the remaining nine months, and deducting the same months from the 1933 total we get 2,360 complaints for the same nine months in 1933.

TABLE II.
Amount Expended for the Collection and Disposal of Ashes and Garbage by Districts.

| DISTRICTS. | Population. | ASHES AND RUBBISH. | | GARBAGE. | | Total Cost. | Per Capita. |
|--------------------------------------|-------------|--------------------|-------------|--------------|-------------|----------------|-------------|
| | | Cost. | Per Capita. | Cost. | Per Capita. | | |
| 1. South Boston..... | 61,235 | \$114,196 04 | \$1.864 | \$34,571 09 | \$0.564 | \$148,767 13 | \$2.429 |
| 2. East Boston..... | 63,039 | 36,857 33 | 0.584 | 2,354 35 | 0.037 | 39,211 68 | 0.622 |
| 3. Charlestown..... | 30,770 | 53,681 13 | 1.744 | 11,323 59 | 0.368 | 65,004 72 | 2.112 |
| 4. Brighton..... | 57,494 | 53,133 42 | 0.924 | 8,079 60 | 0.14 | 61,213 02 | 1.064 |
| 5. West Roxbury..... | 63,701 | 33,845 16 | 0.531 | 7,664 50 | 0.12 | 41,509 66 | 0.651 |
| 6. Dorchester..... | 198,909 | 201,699 71 | 1.014 | 52,843 81 | 0.265 | 254,543 52 | 1.278 |
| 7. Roxbury..... | 151,698 | 309,820 73 | 2.042 | 105,754 10 | 0.696 | 415,574 83 | 2.74 |
| 8 and 9. South End and Back Bay..... | 90,298 | 278,700 31 | 3.086 | 34,813 28 | 0.385 | 313,513 59 | 3.471 |
| 10. North and West Ends..... | 58,488 | 193,199 11 | 3.303 | 23,051 78 | 0.394 | 216,250 89 | 3.697 |
| 11. Hyde Park..... | 26,618 | 11,629 67 | 0.436 | 2,013 28 | 0.075 | 13,642 95 | 0.512 |
| Totals..... | 802,250 | \$1,286,762 61 | \$1.603 | \$282,469 36 | \$0.352 | \$1,569,231 99 | \$1.956 |

TABLE III.
Cost of Collection and Disposal of Refuse by Contract in City of Boston.

| Contract Districts. | CHARACTER OF REFUSE. | Cubic Yards. | Cost per District. | Cost per Cubic Yard. | Population. | Total Cost Per Capita. |
|----------------------|---|--------------|--------------------|----------------------|-------------|------------------------|
| 2. East Boston..... | Mixed refuse..... | 77,659 | | | | |
| | Garbage..... | 3,262 | | | | |
| | Totals..... | 80,921 | \$39,211 68 | \$0 484 | 63,039 | \$0 622 |
| 4. Brighton..... | Mixed refuse..... | 83,954 | | | | |
| | Garbage..... | 7,916 | | | | |
| | Totals..... | 91,870 | \$61,213 02 | \$0 666 | 57,494 | \$1 064 |
| 5. West Roxbury..... | Mixed refuse..... | 54,970 | | | | |
| | Garbage..... | 10,695 | | | | |
| | Totals..... | 65,665 | \$41,509 66 | \$0 632 | 63,701 | \$0 651 |
| 6. Dorchester..... | Mixed refuse..... | 212,904 | | | | |
| | Garbage..... | 47,176 | | | | |
| | Totals..... | 260,080 | \$229,669 43 | \$0 886 | | |
| | Garbage disposal, proportionate charge..... | | 24,874 09 | | | |
| | Totals..... | 260,080 | \$254,543 52 | \$0 978 | 198,909 | \$1 278 |
| 11. Hyde Park..... | Mixed refuse..... | 18,225 | | | | |
| | Garbage..... | 3,152 | | | | |
| | Totals..... | 21,377 | \$13,642 95 | \$0 638 | 26,618 | \$0 512 |
| | Totals (all districts)..... | 519,913 | \$410,120 83 | \$0 788 | 409,761 | \$1 00 |

TABLE IV.
Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year Ending December 31, 1934.

| Districts and Population. | CHARACTER OF REFUSE. | Cubic Yards. | COST PER CUBIC YARD. | | TOTAL COST PER CUBIC YARD. | | | Total Cost, Collection and Disposal. | Total Cost Per Capita. |
|---|----------------------------|--------------|----------------------|---------------|----------------------------|------------------|--------------------|--------------------------------------|------------------------|
| | | | To Collect. | For Disposal. | Collection and Disposal. | Cost to Collect. | Cost for Disposal. | | |
| 1. South Boston (61,235)..... | (Mixed refuse..... | 75,115 | \$0 993 | \$0 527 | \$1 42 | \$74,599 92 | \$39,596 12 | \$114,196 04 | |
| | Garbage..... | 10,532 | 2 726 | 0 527 | 3 253 | 28,719 52 | 5,851 57 | 34,571 09 | |
| | Totals..... | 85,647 | \$1 206 | \$0 527 | \$1 737 | \$103,319 44 | \$45,447 69 | \$148,767 13 | \$2 429 |
| 3. Charlestown (30,770)..... | (Mixed refuse..... | 33,468 | \$1 076 | \$0 527 | \$1 603 | \$36,038 81 | \$17,642 32 | \$53,681 13 | |
| | Garbage..... | 3,730 | 2 508 | 0 527 | 3 035 | 9,357 36 | 1,966 23 | 11,323 59 | |
| | Totals..... | 37,198 | \$1 219 | \$0 527 | \$1 747 | \$45,396 17 | \$19,608 55 | \$65,004 72 | \$2 112 |
| 7. Roxbury (151,698)..... | (Mixed refuse..... | 227,787 | \$0 832 | \$0 527 | \$1 359 | \$189,745 09 | \$120,075 64 | \$309,820 73 | |
| | Garbage..... | 44,030 | 1 874 | 0 527 | 2 401 | 82,544 13 | 23,209 97 | 105,754 10 | |
| | Totals..... | 271,817 | \$1 001 | \$0 527 | \$1 528 | \$272,289 22 | \$143,285 61 | \$415,574 83 | \$2 74 |
| 8 and 9. South End and Back Bay (90,298), | (Mixed refuse..... | 160,491 | \$1 209 | \$0 527 | \$1 736 | \$194,099 08 | \$84,601 23 | \$278,700 31 | |
| | Garbage..... | 14,791 | 1 826 | 0 527 | 2 353 | 27,016 35 | 7,796 93 | 34,813 28 | |
| | Totals..... | 175,282 | \$1 261 | \$0 527 | \$1 788 | \$221,115 43 | \$92,398 16 | \$313,513 59 | \$3 471 |
| 10. North and West Ends (58,488)..... | (Mixed refuse..... | 133,940 | \$0 915 | \$0 527 | \$1 442 | \$122,593 45 | \$70,605 66 | \$193,199 11 | |
| | Garbage..... | 7,284 | 2 637 | 0 527 | 3 164 | 19,212 09 | 3,839 69 | 23,051 78 | |
| | Totals..... | 141,224 | \$1 039 | \$0 527 | \$1 531 | \$141,805 54 | \$74,445 35 | \$216,250 89 | \$3 697 |
| Total, 392,489..... | Totals (all districts).... | 711,168 | \$1 101 | \$0 527 | \$1 629 | \$783,925 80 | \$375,185 36 | \$1,159,111 16 | \$2 953 |

TABLE V.
Comparative Costs Per Cubic Yard 1933-34.

| DAY LABOR DISTRICTS. | COLLECTION. | | TOTAL COST. | | Cubic Yards. 1933. | Cubic Yards. 1934. |
|--------------------------------------|-------------|---------|------------------------------|-------------------------------|-----------------------|-----------------------|
| | 1933. | 1934. | 1933. \$0.54 Disposal. | 1934. \$0.527 Disposal. | | |
| 1. South Boston..... | \$1 35 | \$1 206 | \$1 89 | \$1 733 | 84,853 | 85,647 |
| 3. Charlestown..... | 1 40 | 1 219 | 1 94 | 1 746 | 38,122 | 37,198 |
| 7. Roxbury..... | 1 25 | 1 001 | 1 79 | 1 528 | 251,009 | 271,817 |
| 8 and 9. South End and Back Bay..... | 1 63 | 1 261 | 2 17 | 1 788 | 188,573 | 175,282 |
| 10. North and West Ends.... | 1 12 | 1 004 | 1 66 | 1 531 | 136,844 | 141,224 |
| Average..... | \$1 35 | \$1 102 | \$1 89 | \$1 629 | 699,401 | 711,168 |
| Collection Cost..... | | | | | \$945,009 38 | \$783,925 80 |

| CONTRACT DISTRICTS. | COST PER CUBIC YARD. | | Cubic Yards. 1933. | Cubic Yards. 1934. |
|---|----------------------|---------|-----------------------|-----------------------|
| | 1933. | 1934. | | |
| 2. East Boston..... | \$0 788 | \$0 484 | 52,600 | 80,921 |
| 4. Brighton..... | 561 | 666 | 77,960 | 91,870 |
| 5. West Roxbury..... | 621 | 632 | 67,370 | 65,665 |
| 6. Dorchester (including disposal)..... | 1 206 | 886 | 241,942 | 260,080 |
| 11. Hyde Park..... | 68 | 978 | 22,720 | 21,377 |
| Totals..... | | | 462,592 | 519,913 |
| Average..... | \$0 938 | \$0 788 | | |

TABLE VI.
Old Automobile Removal Report for 1934.

| DISTRICTS. | CHARGED. | | | NOT CHARGED. | | TOTAL. | | Actual Cost Billed Autos. |
|--------------------------------------|----------|-------|-------------------|--------------|-------|--------|-------|------------------------------|
| | Autos. | Lots. | Amount Billed. | Autos. | Lots. | Autos. | Lots. | |
| 1. South Boston..... | 18 | 1 | \$100 00 | ..... | ..... | 18 | 1 | \$215 89 |
| 4. Brighton..... | 7 | 2 | 55 00 | 1 | ..... | 8 | 2 | 78 89 |
| 5. West Roxbury..... | ..... | ..... | ..... | 4 | ..... | 4 | ..... | ..... |
| 6. Dorchester..... | 7 | ..... | 35 00 | 73 | 1 | 80 | 1 | 78 89 |
| 7. Roxbury..... | 28 | ..... | 140 00 | 52 | 2 | 80 | 2 | 351 50 |
| 8. South End, Back Bay and City..... | 16 | 1 | 90 00 | 6 | ..... | 22 | 1 | 231 66 |
| Totals..... | 76 | 4 | \$420 00 | 136 | 3 | 212 | 7 | \$956 63 |

TABLE VII.

Service Cleaning and Oiling Service.

DISTRIBUTION OF EXPENDITURES.

| | |
|---|---------------------|
| Removing snow | \$106,892 99 |
| Flushing streets | 9,579 99 |
| Pushcart patrolling | 101,630 94 |
| Brooming streets | 193,478 27 |
| Horse-drawn sweeping | 107,559 53 |
| Motor sweeping | 21,835 16 |
| Team patrol | 13,753 39 |
| Refuse box collection | 17,907 06 |
| Disposal of old autos | 956 63 |
| <hr/> | |
| Totals | \$573,593 96 |
| Oiling and watering of public streets and ways, | 16,968 46 |
| <hr/> | |
| Totals | <u>\$590,562 42</u> |

APPENDIX D.

REPORT OF THE DIVISION ENGINEER OF THE
SEWER DIVISION.

BOSTON, January 2, 1935.

MR. C. J. CARVEN,
Commissioner of Public Works.

DEAR SIR,—I submit herewith statement of the activities and expenditures of the Sewer Division for the year ending December 31, 1934.

There were built by contractors, day laborers and private parties, 8.79 miles of common sewers and surface drains throughout the city.

After deducting 0.15 mile of sewers and surface drains, rebuilt or abandoned, the net increase for 1934 is 8.64 miles, which, added to the existing 1,189.29 miles of common sewers and surface drains, and 30.93 miles of intercepting sewers, makes a grand total of 1,228.86 miles of common and intercepting sewers (and surface drains) belonging to the City of Boston and under the care of the Sewer Division on January 1, 1935.

There were 333 catch-basins built or rebuilt and 128 abandoned or removed during the year, making a net gain of 205 catch-basins, and a grand total of 21,036 catch-basins under the care of the Sewer Division on January 1, 1935; also 1,839 catch-basins and 4 drop inlets were cleaned by contract.

The sewerage works built during 1934 are listed in detail on the subsequent pages of this report.

Respectfully,

GEORGE W. DAKIN,
Division Engineer.

Financial Statement from January 1, 1934, to December 31, 1934.

| OBJECT. | Balance on Hand Jan. 1, 1934. | Appropriations, Loans and Revenues. | Transfers to | Transfers from | Total Credits. | Expenditures during the Year 1934. | Balance on Hand Dec. 31, 1934. |
|---|-------------------------------------|---|--------------|----------------|----------------|--|--------------------------------------|
| Sewer Service..... | ..... | \$481,812 57 | ..... | \$5,500 00 | \$476,312 57 | \$454,503 66 | \$21,808 91 |
| Sewerage Works..... | \$287,979 81 | 450,063 52 | ..... | ..... | 738,043 33 | 506,824 91 | 231,218 42 |
| P. W. A. * ..... | ..... | 1,000,000 00 | ..... | ..... | 1,000,000 00 | 176,372 98 | 823,627 02 |
| East Boston Pumping Station and outlet.... | 4,456 36 | ..... | ..... | ..... | 4,456 36 | 4,456 36 | |

* \$250,000 authorized but not issued, included.

Sewerage Works, 1934.

| ACCOUNTS. | Labor. | Autos. | Teams. | Materials. | Miscellaneous. | Paid to Contractors. | Totals. |
|-------------------------------------|--------------|------------|---------|-------------|----------------|----------------------|--------------|
| Engineers' salaries..... | \$120,765 38 | ..... | ..... | ..... | ..... | ..... | \$120,765 38 |
| Engineers' expense..... | 10,243 69 | \$1,948 24 | \$62 50 | \$487 00 | \$3,268 57 | \$3,477 69 | 19,487 69 |
| Sundries..... | 429 70 | 46 98 | ..... | 720 89 | 1,840 66 | 2,668 10 | 5,706 33 |
| Land-takings..... | ..... | ..... | ..... | ..... | 1,364 05 | ..... | 1,364 05 |
| New manholes..... | 6,922 43 | 1,952 87 | 18 50 | 2,802 63 | ..... | 3,263 04 | 14,959 47 |
| New catch-basins, South Boston..... | 1,251 09 | 97 98 | ..... | 494 06 | 4 25 | 1,704 74 | 3,552 12 |
| New catch-basins, East Boston..... | 35 86 | ..... | ..... | 35 14 | ..... | 253 00 | 324 00 |
| New catch-basins, Charlestown..... | ..... | ..... | ..... | 2 63 | ..... | 55 41 | 58 04 |
| New catch-basins, Brighton..... | 391 93 | 120 75 | ..... | 186 60 | ..... | 730 00 | 1,429 28 |
| New catch-basins, West Roxbury..... | 2,421 67 | 489 27 | ..... | 1,158 73 | 4 58 | 1,489 17 | 5,563 42 |
| New catch-basins, Dorchester..... | 4,481 51 | 1,238 98 | ..... | 3,217 98 | ..... | 4,224 55 | 13,163 02 |
| New catch-basins, Hyde Park..... | ..... | ..... | ..... | 23 90 | ..... | ..... | 23 90 |
| New catch-basins, Roxbury..... | 3,134 55 | 671 02 | ..... | 1,524 59 | 23 50 | 2,159 74 | 7,513 40 |
| New catch-basins, City Proper..... | 5,211 70 | 492 10 | ..... | 1,561 77 | 19 71 | 14,939 48 | 22,224 76 |
| Repair streets..... | ..... | ..... | ..... | 612 46 | ..... | 639 41 | 1,251 87 |
| Release sewers..... | 113 53 | ..... | ..... | ..... | ..... | ..... | 113 53 |
| Stock..... | ..... | ..... | ..... | 14,658 71 | ..... | ..... | 14,658 71 |
| Holiday..... | 1,216 86 | ..... | ..... | ..... | ..... | ..... | 1,216 86 |
| Totals..... | \$156,619 90 | \$7,058 19 | \$81 00 | \$27,487 09 | \$6,525 32 | \$35,604 33 | \$233,375 83 |

| | | | | | | | |
|--|--------------|------------|---------|-------------|-------------|--------------|--------------|
| Sewers built, entire city..... | 38,837 99 | 2,521 02 | ..... | 6,551 34 | 15,487 64 | 227,722 69 | 291,120 68 |
| Totals..... | \$195,457 89 | \$9,579 21 | \$81 00 | \$34,038 43 | \$22,012 96 | \$263,327 02 | \$524,496 51 |
| Less construction stock, \$9,862.96; less maintenance stock, \$6,848.53; less autos and teams, \$8,754.48} | ..... | 8,754 48 | ..... | 16,711 49 | ..... | ..... | 25,465 97 |
| Totals..... | \$195,457 89 | \$824 73 | \$81 00 | \$17,326 94 | \$22,012 96 | \$263,327 02 | \$199,030 54 |
| Debit transfer from Sewer Service autos and teams. | ..... | 7,923 28 | ..... | ..... | ..... | ..... | 7,923 28 |
| Totals..... | \$195,457 89 | \$8,748 01 | \$81 00 | \$17,326 94 | \$22,012 96 | \$263,327 02 | \$506,953 82 |
| Debit transfer to Sewer Service stock..... | ..... | ..... | ..... | 128 91 | ..... | ..... | 128 91 |
| Totals..... | \$195,457 89 | \$8,748 01 | \$81 00 | \$17,198 03 | \$22,012 96 | \$263,327 02 | \$506,824 91 |

Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive.

| LOCATION. | Begun. | Finished. | Built by | Length. (Feet.) | Character. | Amount Expended in 1934. |
|--|---------------|----------------|-----------------------------------|---------------------------|--|--------------------------------|
| SOUTH BOSTON. | | | | | | |
| Dorchester brook overflow, across Southampton street about 360 feet east of New York, New Haven and Hartford Railroad and Dorchester brook channel in private land, between existing 10-foot by 12-foot concrete overflow north of Massachusetts avenue and South bay. | Nov. 6, 1933 | Nov. 15, 1934 | V. J. Grande..... | 3,593.14 117.79 | Channel excavation..... Double 14 by 15" concrete channels, 4 manholes, 1 lamp hole, 2 catch-basins. | \$41,944 76 |
| EAST BOSTON. | | | | | | |
| Faywood avenue..... | Nov. 2, 1933 | July 14, 1934 | Mirand Construction Company. | 881.10 878.05 | 10" pipe, sewer 12" pipe, surface drain. 10 manholes. | 2,003 97 |
| Orient avenue, from Montmorenci avenue to 330 feet easterly. | Oct. 9, 1933 | Nov. 4, 1933 | The Prompt Contractors, Inc. | ..... | ..... | 283 61 |
| Sea View avenue and Waldemar avenue, East Boston, and Binney street, Roxbury. | July 27, 1933 | Aug. 28, 1933 | Battery Contracting Company. | ..... | ..... | 154 12 |
| Everett court, from Everett street to 120 feet northerly. | June 13, 1934 | June 26, 1934 | J. DiAmico, Inc..... | 117.65 | 12" pipe, sewer 1 manhole. | 785 72 |
| Montmorenci avenue..... | July 28, 1933 | Sept. 18, 1933 | D. Paci and DiBartolomeo Company. | ..... | ..... | 266 84 |
| Orient avenue and outlet in private land, from Faywood avenue to Montmorenci avenue. | Aug. 2, 1934 | Aug. 31, 1934 | T. J. O'Connell Company.. | 406.02 24.57 379.59 | 10" pipe, sewer 12" pipe, surface drain. 10" pipe, surface drain. 7 manholes. | 3,494 54 |
| CHARLESTOWN. | | | | | | |
| Chestnut street, from Adams street to Mt. Vernon avenue. | June 5, 1933 | July 7, 1933 | Marion Construction Company. | ..... | ..... | 73 03 |

| | | | | | | | | |
|---|-------|----------|--------|----------|---|--------|---|----------|
| North Mead street, from Medford street 264 feet southerly. | Nov. | 22, 1933 | Aug. | 1, 1934 | A. R. Doyle, Inc. | 0.85 | 15" pipe, sewer. | 208 25 |
| Alford street, from Malden Bridge to Everett line. | June | 7, 1934 | July | 12, 1934 | Roxbury Concrete Construc- tion Company. | 286.00 | pipe, minor drain 6 manholes, 17 catch-basins, 3 special catch-basins, 6 drop inlets. | 4,061 83 |
| BRIGHTON. | | | | | | | | |
| Bertram, Kingsley, Travis streets and outlet. | Aug. | 28, 1933 | Sept. | 28, 1933 | DiCenso and Volpe Com- pany. | | | 664 88 |
| Bagnal street, from Aldie street to Holton street and outlet in Aldie street, between Everett street and Bagnal street. | Nov. | 28, 1933 | May | 11, 1934 | C. W. A. and day labor. | 346.00 | 12" pipe, surface drain 3 manholes, 3 catch-basins, 1 lamp hole. | 1,463 25 |
| Colborne road and Monastery road. | May | 4, 1933 | July | 15, 1933 | P. Guarino & Co., Inc. | | | 191 43 |
| Englewood avenue, from Brookline line to 220 feet west of Chiswick road. | June | 12, 1933 | July | 20, 1933 | DiFederico and Giammarco Company. | | | 162 26 |
| Glenmount road, from Lake street to Foster street. | May | 2, 1933 | June | 7, 1933 | DiCenso and Volpe Com- pany. | | | 114 61 |
| Pendergast avenue, from Beacon street to Brookline line. | Dec. | 11, 1933 | April, | 1934 | Roxbury Concrete Construc- tion Company. | 133.50 | 18" sewer. | 1,750 94 |
| Coolidge road and Arden street, from Has- kell street to Hooker street. | Nov. | 6, 1933 | Dec. | 9, 1933 | The Prompt Contractors, Inc. | | | 391 11 |
| South Hobart and Melvin streets *. | Aug., | 1930 | | 1931 | D. V. Construction Com- pany. | | | 177 67 |
| Foster street and outlet northeast of Lane park. | Oct. | 1, 1934 | Oct. | 11, 1934 | Department labor. | 60.00 | 24" pipe, surface drain. | 820 91 |
| Hooker street, from North Harvard street to 400 feet easterly. | Oct. | 25, 1934 | Nov. | 10, 1934 | Frank J. Jacobs Company. | 400.30 | 12" pipe, surface drain. | 994 32 |

* Final payment — execution of court.

Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive.—Continued.

| LOCATION. | Began. | Finished. | Built by. | Length. (Feet.) | Character. | Amount Expended in 1934. |
|---|----------------|----------------|--|--------------------|---|--------------------------------|
| WEST ROXBURY. | | | | | | |
| Homewood road, between Cottage avenue and 300 feet easterly; and private land, between Landseer street and Pine Ridge road. | Nov. 2, 1932 | Jan. 31, 1933 | Roxbury Concrete Construction Company. | ..... | ..... | \$121 46 |
| Atherton avenue, from Washington street to Albano street. | Oct. 19, 1933 | Nov. 6, 1933 | M. DeSisto Company..... | ..... | ..... | 191 60 |
| Bonad road, Edgebrook road and Russett road. | May 1, 1933 | July 1, 1933 | Ralph Susi..... | ..... | ..... | 222 73 |
| Bronx road and Ansonia street..... | Dec. 8, 1933 | May 14, 1934 | D. Federico and Giannatrocio Company. | 642.95 | 10" pipe sewer..... | 2,947 47 |
| Cedarwood road and outlet in Hillcroft road, | Sept. 28, 1933 | Nov. 13, 1933 | Joseph Capone..... | ..... | ..... | 462 17 |
| Clare avenue, from Ramsdell avenue to Canterbury street. | June 15, 1933 | July 13, 1933 | A. Piatelli & Co..... | ..... | ..... | 64 44 |
| Cranston road, Bonad road, and private land. | May 8, 1933 | Aug. 31, 1933 | George A. Baker Company, Inc. | ..... | ..... | 614 85 |
| Dwinell street, Swallow street, Martin street, and Atlantic street. | Aug. 24, 1933 | Sept. 21, 1933 | R. Susi and Justino..... | ..... | ..... | 311 60 |
| Hollywood road, from Willowdean avenue to Church street. | June 9, 1933 | June 26, 1933 | DiCenzo and Volpe Company. | ..... | ..... | 54 30 |
| Hinsdale road brook..... | April 13, 1934 | July 9, 1934 | C. W. A. changed to E. R. A. | 225.00 35.00 | 12" brook sewer. 12" brook sewer. 1 manhole. | 1,175 33 |
| Keith street, from Baker street to Perham street. | Nov. 29, 1932 | May 11, 1934 | C. W. A..... | 146.07 157.39 | 12" surface drain. 10" surface drain. 1 manhole. 2 catch-basins. | 1,026 00 |

| | | | | | | | |
|--|--------------|----------|----------|--------------------|------------------------------------|--|----------|
| La Grange street, between Washington street and Partridge street, and Bellevue street, between Robin street and West Border road. | June 8, 1933 | July | 27, 1933 | Tufo & Yelba, Inc. | | | 763 26 |
| Mahler road and Colgate road | Sept. | 7, 1933 | Sept. | 27, 1933 | D. Federico and Giammarco Company. | | 421 37 |
| Orange street and Zeller street (sheet asphalt paving). | Oct. | 11, 1933 | Nov. | 20, 1933 | Lozza & Foraci. | | 240 26 |
| Partridge street, private land and Pheasant street. | July | 18, 1933 | Jan. | 1, 1934 | P. Guarino & Co. | | 1,575 91 |
| Perham street, from Vermont street to Keith street. | Nov. | 29, 1933 | May | 11, 1934 | C. W. A. | 220.00 211.39 | 1,201 06 |
| St. Theresa avenue, from Centre street to 115 feet east of Howitt road extension. | May | 7, 1933 | Sept. | 5, 1933 | Tenaglia Construction Company. | 12" surface drain. 10" surface drain. 4 manholes. 4 catch-basins. | 1,000 97 |
| Weld street, from Cerdan avenue to West Roxbury Parkway and outlet in Ravenna road and private land. | Nov. | 14, 1933 | Jan. | 1, 1934 | Tenaglia Construction Company. | | 5,139 73 |
| Washington street, from High View avenue to 160 feet northwesterly. | Jan. | 8, 1934 | Mar. | 23, 1934 | Day labor. | 167.06 | 1,993 54 |
| Haverford street, from Cornwall street to Germania street. | Nov. | 16, 1933 | Dec. | 9, 1933 | Joseph Capone. | | 385 54 |
| Washington street, from Cowing street to Cottage avenue; Cottage avenue, between Washington street and 381 feet northwesterly; and Vershire street and outlet. | June | 26, 1933 | Nov. | 14, 1933 | Keystone Engineering Company. | | 944 45 |
| West Saville street and outlet in Edmunds road. | Sept. | 14, 1932 | Oct. | 15, 1932 | A. Tosti. | | 71 95 |
| Cranston road, Bonad road and private land. | Sept. | 25, 1933 | Nov. | 10, 1933 | C. Russo & Co. | | 328 91 |
| Dent street brook, from Brook Farm Parkway to Lasell street. | July | 11, 1933 | Sept. | 23, 1933 | C. Russo & Co. | | 552 46 |

Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive.—(Continued.)

| LOCATION. | Began. | Finished. | Built by. | Length. (Feet.) | Character. | Amount Expended in 1934. |
|---|----------------|----------------|----------------------------------|--------------------|--|--------------------------------|
| <i>West Roxbury.—Concluded.</i> | | | | | | |
| Private land, Royen road and outlet in private land and Rambler road. | June 14, 1933 | Aug. 31, 1933 | Charles Struzziery | | | \$645 81 |
| Parklawn road, from Brook Farm Parkway to Weld street. | Nov. 14, 1933 | Dec. 9, 1933 | Charles Struzziery | | | 370 15 |
| Westchester road, from Centre street to end of street. | Aug. 10, 1933 | Sept. 10, 1933 | Louis Balboni | | | 124 17 |
| Bellevue street, from March avenue to Howitt road. | Aug. 28, 1933 | Oct. 12, 1933 | A. Grande | | | 343 22 |
| Northbourne road, from Wachusett street to Bourne street. | Aug. 25, 1933 | Sept. 23, 1933 | M. DeSisto Company | | | 408 59 |
| Park Boulevard, from Centre street to Winchendon road. | Aug. 26, 1933 | Oct. 5, 1933 | C. J. Maney Company | | | 546 81 |
| Woodard road and outlet in private land to Stratford street. | Sept. 13, 1933 | Oct. 16, 1933 | Cefalo Contracting Company, Inc. | | | 112 35 |
| Woodward road, from existing surface drain to Saville street. | April 18, 1934 | June 14, 1934 | Department labor | 66.00 | 12" surface drain. 1 manhole. | 530 77 |
| Spring street brook extension at Baker street to Prospect street. | May 10, 1934 | Aug. 4, 1934 | Department labor | 140.00 50.00 | 30" brook drain. 24" brook drain. | 2,756 73 |
| Greston road, from Centre street northwesterly. | Aug. 27, 1934 | Nov. 22, 1934 | Joseph Capone | 334.48 633.00 | 12" surface drain. 10" surface drain. 4 manholes. 8 catch-basins. 6 drop inlets. | 3,250 32 |

| | | | | | | |
|--|----------------|---------------|--|---|---|-----------|
| Peak Hill road and outlet in Park Front road to Weld street. | Aug. 15, 1934 | Oct. 4, 1934 | The Prompt Contracting Company, Inc. | 437.53 357.80 455.52 | 15" surface drain. 12" surface drain. 10" surface drain. 8 manholes. 4 catch-basins. 4 drop inlets. | 3,898 56 |
| Goodway road, from Florence street to Bourne street. | Sept. 26, 1934 | Nov. 10, 1934 | Roxbury Concrete Construction Company. | 498.60 495.72 | 10" surface drain. 12" surface drain. 7 manholes. 4 catch-basins. | 2,805 55 |
| Stinson street brook at Birch street, Dana road to Oak road, and culvert across Pond street. | Oct. 2, 1934 | | E. R. A. | 430.00 | 12" brook drain. | 828 74 |
| Cowing street, from Washington street to Vershire street and Alleyne street. | July 3, 1933 | Dec. 7, 1933 | Rosli ndale Contracting Company. | | | 1,677 65 |
| Bismarck street, from Boylston street. | May 18, 1932 | July 21, 1932 | Samuel J. Tomasello. | | Repaving. | 308 40 |
| Dent street, from Lasell street to Glenham street. | Dec. 31, 1934 | | M. DeSisto Company. | | | 8 00 |
| Keith street, from Alder street to Carroll street. | Nov. 20, 1934 | Dec. 29, 1934 | J. D'Amico, Incorporated. | 239.38 233.37 | 10" surface drain. 15" surface drain. 2 manholes. 4 catch-basins. | 848 20 |
| Runford road, from Chesborough road to Baker street. | Dec. 31, 1934 | | Frank J. Jacobs Company. | | | 17 00 |
| Delano park, from Poplar street to Chardon street. | Sept. 12, 1933 | Oct. 24, 1933 | S. Asgrizzi. | | | 56 00 |
| Auckland street and Savin Hill avenue. | June 5, 1933 | April 3, 1934 | N. Cibotti & Co. | 7.13 181.55 12.35 22.50 25.00 5.37 182.50 5.50 5.50 402.00 | 20" pipe sewer. 15" pipe sewer. 12" pipe sewer. 24" pipe surface drain. 12" pipe surface drain. 3' 6" concrete conduit. 3' 3" concrete conduit. 3' concrete conduit. 6" to 24" cast-iron pipe. Minor drain. 6 manholes. | 20,964 58 |

DORCHESTER.

Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive. — (Continued.)

| LOCATION. | Begun. | Finished. | Built by. | Length. (Feet.) | Character. | Amount Expended in 1934. |
|--|----------------|----------------|------------------------------|--|---|--------------------------------|
| DORCHESTER. — Continued. | | | | | | |
| Ashton street and Woodrow avenue..... | June 12, 1933 | July 7, 1933 | Battery Contracting Company. | | | \$255 61 |
| Anekland street, from Bay street to Dewar street. | Nov. 28, 1933 | Dec. 21, 1933 | Samuel J. Tomasello..... | | Re-paving..... | 1,676 31 |
| Agawan street and Neponset avenue..... | Nov. 28, 1933 | April 27, 1934 | C. W. A. and day labor..... | 218.20 | 12" pipe surface drain..... 2 manholes, 1 catch-basin. | 522 52 |
| Assabet street..... | Nov. 28, 1933 | April 27, 1934 | C. W. A. and day labor..... | 195.70 | 12" pipe surface drain..... 2 manholes. | 1,019 72 |
| Belden street and Brookdale street..... | Sept. 12, 1933 | Oct. 23, 1933 | Mirand Construction Company. | | | 128 83 |
| Branchfield street, from Medway street to Butler street. | Jan. 12, 1933 | June 24, 1933 | John Williams..... | | | 64 11 |
| Crescent avenue brook, outlet in private land, between Strandway and 1,100 feet northeasterly. | July 17, 1933 | April 11, 1934 | James J. Coughlin & Sons... | 90.00 | 8' by 7' double channel..... | 31,380 17 |
| Dudley street, from Magnolia street to Columbia road. | May 15, 1933 | Sept. 6, 1933 | John Williams..... | | | 4,605 87 |
| Dudley street, from Magnolia street to Columbia road (permanent repaving). | Oct. 19, 1933 | Nov. 1, 1933 | W. G. C. Company..... | | Paving..... | 1,141 20 |
| Favre street (Ward 18), from Cummins Highway to Messinger street. | Nov. 1, 1933 | Jan. 22, 1934 | R. Susi and Justino..... | 36.00 10.00 8.00 29.80 7.80 49.60 | 12" pipe, sewer..... 18" pipe, sewer..... 20" cast-iron pipe..... 4' 6" by 6' concrete conduit..... 4' 6" concrete conduit..... 6' concrete conduit..... 4 manholes..... 4 catch-basins..... Minor drain. | 3,612 45 |

| | | | | | | | | |
|---|-------|----------|-------|----------|--|-----------------|--|----------|
| Freeland street (Ward 18), from Standard street to 130 feet north of Eskridge road. | Dec. | 18, 1933 | April | 4, 1934 | V. Calia..... | 35.00 727.30 | 10" pipe, sewer..... 12" pipe, surface drain. 7 manholes. 5 catch-basins. Minor drain. | 2,345 27 |
| Huntoon street, from Medway street to Butler street. | June | 14, 1933 | June | 29, 1933 | Joseph Capone..... | 153.00 | | 53 66 |
| Hill Top street and private land..... | Oct. | 6, 1933 | Jan. | 31, 1934 | A. Grande..... | | | 4,350 54 |
| Magnolia street, from Quincy street to Bird street. | Aug. | 28, 1933 | Oct. | 26, 1933 | John Williams..... | | | 513 58 |
| Myrtlebank avenue..... | Nov. | 28, 1933 | April | 27, 1934 | C. W. A..... | 1,109.35 | 12" pipe, surface drain. 9 manholes. 3 catch-basins. | 1,189 33 |
| Neponset avenue, from Adams street to Minot street. | Sept. | 7, 1933 | Oct. | 14, 1933 | Samuel J. Tonasello..... | | | 478 38 |
| Oakland brook, from Neponset river to Haven avenue. | Oct. | 17, 1933 | Dec. | 16, 1933 | Charles Struzziery..... | | | 1,179 57 |
| Pine Ridge road, from Morton street to Gallivan Boulevard. | Sept. | 25, 1933 | Nov. | 16, 1933 | M. DeSisto Company..... | | | 346 44 |
| Pumping Station, Calf-Pasture, new air pump shaft No. 5 engine. | Nov. | 6, 1933 | Nov. | 27, 1933 | Boston Engineering Company..... | | | 190 75 |
| Private land, from Board of Survey street, No. 533, to Manchester Street extension. | Dec. | 4, 1933 | Feb. | 14, 1934 | Begun by Joseph Botti & Son. Completed by Leo J. Nawn, Inc. | 289.00 | 10" pipe, sewer..... 3 manholes. | 2,156 84 |
| Pleasant street, from East Cottage street to Stoughton street. | Nov. | 18, 1933 | Nov. | 25, 1933 | Simpson Brothers Corporation..... | | Repaving..... | 459 87 |
| Wilmington avenue and Capen street..... | July | 10, 1933 | Aug. | 3, 1933 | Vito Calia..... | | | 257 46 |
| Arbutus street and Blue Hill avenue..... | March | 19, 1934 | April | 13, 1934 | Department labor..... | 56.00 | 8" pipe sewer. | 827 51 |
| Branton street and Woodfield street, each, from Gallivan Boulevard to Minot street. | Aug. | 23, 1933 | Sept. | 15, 1933 | C. Capone..... | | | 82 63 |
| Crockett avenue, from Hill Top street to Milton street. | Sept. | 7, 1933 | Sept. | 20, 1933 | Joseph Capone..... | | | 40 62 |

Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive.—Continued.

| LOCATION. | Begun. | Finished. | Built by. | Length. (Feet.) | Character. | Amount Expended in 1934. |
|--|---------------|----------------|--|--------------------|---|--------------------------------|
| <i>DORCHESTER.—Concluded.</i> | | | | | | |
| Lenoxdale avenue and Gallivan Boulevard, | May 18, 1933 | July 15, 1933 | Roxbury Concrete Construction Company. | | | \$515 81 |
| Private land, between Wilder street and Normandy street. | Aug. 26, 1933 | Sept. 26, 1933 | Matthew Cummings. | | | 571 71 |
| Tennis road and outlet in Blue Hill avenue. | Aug. 2, 1933 | Oct. 25, 1933 | Joseph Capone. | | | 102 53 |
| Eunice street and Manor street. | Aug. 29, 1933 | Oct. 26, 1933 | The Prompt Contracting Company, Inc. | | | 132 75 |
| Haven avenue, from Blue Hill avenue to 330 feet westerly. | Aug. 31, 1933 | Oct. 21, 1933 | Charles Struzziery. | | | 210 33 |
| Train street, from Victory road to Ashmont street. | Oct. 9, 1933 | Nov. 4, 1933 | John Williams. | | | 1,033 64 |
| Gallivan Boulevard, from Allendale avenue to Myrtlebank avenue. | May 12, 1933 | June 23, 1933 | Department labor. | | | 4 50 |
| Haven avenue, from existing sewer to 165 feet westerly. | June 14, 1934 | Sept. 13, 1934 | Department labor. | 171.00 171.00 | 10" pipe sewer. 12" pipe surface drain. 3 manholes. | 3,514 36 |
| Savin Hill avenue, from Dorchester avenue to Treadway road (permanent repaving). | June 30, 1934 | July 9, 1934 | E. J. Byrne. | | Paving. | 2,130 09 |
| Topliff street, from Longfellow street to Bowdoin street. | Aug. 24, 1933 | Sept. 27, 1933 | P. Cacchione. | | | 4 68 |

| | | | | | | | | |
|--|-------|----------|------|----------|------------------------------------|--|---|-----------|
| HYDE PARK. Hawthorne street, Prescott street, and private land, Hyde Park. | Jan. | 3, 1934 | May | 22, 1934 | Charles Struzziory | 1,155.45 112.00 | 15" pipe, sewer. Minor drain, 10 manholes. | 22,375.88 |
| | Sept. | 5, 1933 | Oct. | 17, 1933 | Anthony Petrucci | | | 436.43 |
| Ransom road, from Greenfield road to 205 feet southwesterly. | March | 19, 1934 | May | 2, 1934 | John DiBartolomeo and Cefalo. | 294.00 287.00 | 10" pipe, sewer. 12" pipe, sewer. 5 manholes. | 1,472.38 |
| Summer brook in Jefferson street, Metro- politan avenue and Central avenue. | July | 3, 1933 | Oct. | 6, 1933 | C. Repucci, Inc. | | | 517.06 |
| Windsor street, from Tileston street to 340 feet northeasterly. | Aug. | 10, 1934 | Aug. | 31, 1934 | Frank J. Jacobs | 366.80 | 12" pipe, sewer. 2 manholes. | 1,415.86 |
| Camp ground area and outlet in Metro- politan Park, Stanley street, Forest street and Hawthorne street, Hyde Park. | Nov. | 2, 1934 | | | N. Cibotti & Co. | 480.00 | 18" pipe, sewer. 1 manhole. | 5,533.22 |
| ROXBURY. Adams street, from Dudley street to Forest street. | June | 22, 1933 | July | 15, 1933 | A. Petrucci | | | 38.95 |
| | Sept. | 16, 1933 | Oct. | 25, 1933 | Baker Matz | | | 913.46 |
| Brookline avenue to Audubon road and Back Bay Fens near gate house. | May | 15, 1933 | June | 28, 1933 | C. Russo | | | 116.05 |
| Dorchester Brook, lower level, sewer in Shirley street and in Norfolk avenue. | Oct. | 11, 1933 | Dec. | 10, 1934 | C. & R. Construction Com- pany. | 658.80 1,036.50 32.28 9.70 40.00 | 2' by 3' 8" concrete sewer. 1' 6" by 2' 6" concrete sewer. 16" and 24" iron pipe, sewer. 12" pipe, sewer. 10" catch-basin drain. 10 catch-basins, 13 manholes. 2 special manholes. 12" pipe, sewer abandoned. | 36,619.06 |

Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive.—Concluded.

| LOCATION. | Begun. | Finished. | Built by. | Length. (Feet.) | Character. | Amount Expended in 1934. |
|--|----------------|---------------|-----------------------------------|--------------------|---|--------------------------------|
| <i>ROXBURY.—Concluded.</i> | | | | | | |
| Fellows street, from Orange court to Hunne- man street. | Dec. 8, 1933 | June 26, 1934 | A. Piatelli Company..... | 570.00 | 2' 4" by 4' 5" concrete sewer..... 7 manholes. 1 catch-basin. 12" pipe, sewer abandoned. | \$26,565 24 |
| Holborn terrace from Holborn street south- eily, to end of terrace. | June 20, 1933 | Aug. 29, 1933 | T. J. O'Connell Company..... | 573.00 | | 74 28 |
| Georgia street, from Blue Hill avenue to Montana street, and Rockland street, from Walnut street to about 95 feet westerly. | July 11, 1933 | Aug. 15, 1933 | DiCenso and Volpe Com- pany. | | | 82 32 |
| Maywood brook in Laurel street, Ottawa street, Dale street and Sherman street. | June 22, 1931 | | John F. Kennedy..... | | | 2,082 44 |
| For completing Maywood brook in Laurel street, and Ottawa street, from Dale street to Sherman street. | April 23, 1935 | | James J. Coughlin & Sons, Inc. | | | 489 50 |
| <i>CITY PROPER.</i> | | | | | | |
| Nashua street and Lowell street overflow extension. | Sept. 5, 1933 | Nov. 16, 1933 | V. J. Grande..... | | | 1,042 16 |
| Sharon street, from Albany street to Har- rison avenue. | Sept. 20, 1933 | Oct. 27, 1933 | C. Andreassi..... | | | 618 41 |

P. W. A. Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive.

| LOCATION. | Begun. | Finished. | Built by. | Length. (Feet.) | Character. | Amount Expended in 1934. |
|---|----------------|-----------|-------------------------------------|---|--|--------------------------------|
| EAST BOSTON. (4193-N) Cottage street, from Porter street to Maverick street. | Nov. 27, 1934 | | R. Zoppo..... | | | \$891 28 |
| BRIGHTON. (4193-G) Shepard brook in Everett street. | Sept. 21, 1934 | | V. J. Grande..... | 451 63 225 00 600 00 58 00 | 15" by 10" sanitary sewer. 10" sanitary sewer. 5' 6" by 7' 3" U-shape conduit. 3' conduit. 4 manholes on sanitary sewer. 2 manholes on surface drain. 1 catch basin. | 15,482 75 |
| WEST ROXBURY. (4193-A) Stony brook (section 12), from 150 feet northwest of Florence street to Neponset avenue. | July 2, 1934 | | A. Piatelli and C. D. Mar- tino. | 55 00 60 00 411 00 | 20" sanitary sewer. 24" surface drain. 15" by 13" concrete conduit. 1 manhole on sanitary sewer. 1 manhole on surface drain. | 25,617 66 |
| (4193-B) Stony brook (section 13), from Neponset avenue to 400 feet northeast of Mt. Hope street. | Aug. 1, 1934 | | George A. Fuller Company.. | 405 00 | 15" by 13" concrete conduit 1 manhole on surface drain. | 17,216 10 |
| (4193-F) La Grange street, from West Border road to Newton line. | Aug. 14, 1934 | | Charles Struzziery..... | 156 00 590 00 2,395 00 1,217 00 10 00 | 10" sanitary sewer. 24" surface drain. 15" to 10" surface drain. 10" by 6' 8" concrete conduit. 10' by 6' 8" to 10' by 5' concrete reducer. 23 manholes on surface drain. 3 manholes on sanitary sewer. 19 catch-basins. | 48,437 14 |

P. W. A. Sewerage Works, Construction, January 1, 1934, to December 31, 1934, Inclusive.—Concluded.

| LOCATION. | Begun. | Finished. | Built by. | Length. (Feet.) | Character. | Amount Expended in 1933. |
|--|----------------|--------------|------------------------------------|---|--|--------------------------------|
| (4193-E) Walk Hill street, between Hyde Park avenue and Harvard street, West Roxbury. | Oct. 8, 1934 | ..... | Sulmona Construction Com- pany. | 663.23 6,717.57 | 10" sanitary sewer. 24" to 10" sanitary sewer. 6 manholes on sanitary sewer. 37 manholes on surface drain. 1 jug handle manhole. 20 catch-basins. | \$17,877 90 |
| DORCHESTER. (4193-D) Ashmont street, from Adams street to Ne- ponset avenue, and Ashmont street outlet in private land, between Neponset avenue and Ashmont street. | Aug. 27, 1934 | ..... | T. J. O'Connell..... | 34.00 509.00 2,743.01 82.00 90.00 1,206.00 | 24" pipe, surface drain. 20" by 18" pipe, surface drain. 10", 12" 15" pipe, surface drain. 3' 6" circular concrete conduit. 2' 9" circular concrete conduit. 22 manholes on surface drain. 3 manholes on sewer. 5 catch-basins. Minor drain. | 20,933 31 |
| (4193-H) Savin Hill avenue, from railroad bridge to railroad bridge. | Sept. 17, 1934 | Dec. 4, 1934 | A. Singarella..... | 377.50 284.60 3,413.40 16.00 | 24" pipe, surface drain. 18" pipe, surface drain. 12"-15" pipe, surface drain. 12"-15" pipe, sewer rebuilt. 30 manholes on surface drain. 11 manholes on sewer. 11 catch-basins. | 13,259 26 |
| (4193-K) Tenene creek conduit..... | ..... | ..... | ..... | ..... | Office work..... | 29 34 |
| (4193-L) Tenene creek conduit..... | ..... | ..... | ..... | ..... | Office work..... | 29 34 |
| (4193-O) Dorchester brook..... | ..... | ..... | ..... | ..... | Office work..... | 218 12 |

| | | | | | | |
|---|----------------|-------|------------------------------|--|--|----------|
| HYDE PARK. (4193-C) | Sept. 19, 1934 | ..... | Calia & Zarilla, Inc. | 970.00 299.92 390.60 1,555.00 583.60 819.00 143.00 | 10" by 12" pipe, sewer. 10" pipe, sewer. 12" pipe, surface drain. 12"-15" pipe, surface drain. 20" pipe, surface drain. 24" pipe, surface drain. 11 manholes on sewer. 28 manholes on surface drain. 8 catch-basins. Minor drain. | 9,352 03 |
| (4193-P) | Nov. 27, 1934 | ..... | James Chesatone. | 121.00 | 4' circuit concrete conduit..... | 808 66 |
| (4193-J) | Oct. 29, 1934 | ..... | Charles Andreassi & Co. | 309.00 | 4' circular concrete conduit..... 2 manholes. | 2,983 27 |
| ROXBURY. (4193-M) | ..... | ..... | ..... | ..... | Office work. | 285 00 |
| Maywood's brook in Circuit street, private land, Cathedral court, Ray street, and Regent street, from Washington street to Dale street. | ..... | ..... | ..... | ..... | ..... | ..... |
| CITY PROPER. (4193-I) | Nov. 26, 1934 | ..... | A. Baruffaldi Company. .... | ..... | Excavating. | 1,052 48 |
| MISCELLANEOUS. | ..... | ..... | ..... | ..... | ..... | ..... |
| Blue Printing, cement testing, office work... | ..... | ..... | ..... | ..... | ..... | 2,307 30 |

SEWER DIVISION.

Summary of Sewer Construction for Twelve Months Ended
December 31, 1934.

| DISTRICTS. | Built by City by Contract, Day Labor, C. W. A. or P. W. A. | Built by Private Parties. | Total Length Built. | |
|-------------------|---|---------------------------------|---------------------|---------------|
| | | | <i>Linear Feet.</i> | <i>Miles.</i> |
| City Proper..... | | 610.00 | 610.00 | 0.116 |
| Roxbury..... | 2,307.28 | | 2,307.28 | 0.437 |
| South Boston..... | 117.79 | | 117.79 | 0.022 |
| East Boston..... | 2,686.98 | | 2,686.98 | 0.509 |
| Charlestown..... | 171.10 | | 171.10 | 0.032 |
| Brighton..... | 2,299.18 | | 2,299.18 | 0.436 |
| West Roxbury..... | 19,273.31 | | 19,273.31 | 3.650 |
| Dorchester..... | 11,317.66 | | 11,317.66 | 2.144 |
| Hyde Park..... | 7,631.77 | | 7,631.77 | 1.445 |
| Totals..... | 45,805.07 | 610.00 | 46,415.07 | 8.791 |

Net Increase in Length of Sewers Built Between January 1, 1934, and December 31, 1934.

| DISTRICT. | Length of Sewers Built During Twelve Months Ended December 31, 1934. | Length of Sewers Re- built or Abandoned During Twelve Months Ended December 31, 1934. | Net Increase for Twelve Months Ended December 31, 1934. | |
|-------------------|---|--|---|---------------|
| | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Miles.</i> |
| City Proper..... | 610.00 | 48.00 | 562.00 | 0.106 |
| Roxbury..... | 2,307.28 | 600.00 | 1,707.28 | 0.323 |
| South Boston..... | 117.79 | ..... | 117.79 | 0.022 |
| East Boston..... | 2,686.98 | ..... | 2,686.98 | 0.509 |
| Charlestown..... | 171.10 | 142.38 | 28.72 | 0.005 |
| Brighton..... | 2,299.18 | ..... | 2,299.18 | 0.436 |
| West Roxbury..... | 19,273.31 | ..... | 19,273.31 | 3.650 |
| Dorchester..... | 11,317.66 | 26.00 | 11,291.66 | 2.140 |
| Hyde Park..... | 7,631.77 | ..... | 7,631.77 | 1.445 |
| Totals..... | 46,415.07 | 816.38 | 45,598.69 | 8.636 |

| <i>Total Length of Sewers.</i> | | | <i>Miles.</i> |
|---|--|--|---------------|
| Common sewers and surface drains built previous to January 1, 1934..... | | | 1,189.29 |
| Net increase of common sewers and surface drains between January 1, 1934, and December 31, 1934..... | | | 8.64 |
| Total common sewers and surface drains to December 31, 1934..... | | | 1,197.93 |
| Total intercepting sewers connecting with Metropolitan sewers to December 31, 1934..... | | | * 6.81 |
| Total Boston main drainage intercepting sewers to December 31, 1934.. | | | * 24.12 |
| Grant total of common and intercepting sewers to December 31, 1934.. | | | 1,228.86 |
| Total mileage of streets containing sewerage works to December 31, 1934. | | | 667.38 |

* No additional lengths during year 1934.

Summary of Sewer Construction for Five Years Previous to December 31, 1934.

| | 1930. | 1931. | 1932. | 1933. | 1934. |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|
| | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> | <i>Linear Feet.</i> |
| Built by the city by contract or day labor.... | 146,836.12 | 137,783.66 | 96,452.48 | 93,434.36 | 45,805.07 |
| Built by private parties, | 5,090.03 | 5,862.05 | 6,155.52 | 972.00 | 610.00 |
| Totals..... | 151,926.15 | 143,645.71 | 102,608.00 | 94,406.36 | 46,415.07 |

Catch-basins in Charge of Sewer Division.

| DISTRICTS. | CATCH-BASIN DATA FOR TWELVE MONTHS ENDED DECEMBER 31, 1934. | | | TOTAL FOR WHOLE CITY IN CHARGE OF SEWER DIVISION. | |
|-------------------|---|------------------------------|---------------|---|---------------------------------|
| | Number Built or Rebuilt. | Number Abandoned or Removed. | Net Increase. | Previous Report to January 1, 1934. | Grand Total to January 1, 1935. |
| City Proper..... | 81 | 70 | 11 | 3,594 | 3,605 |
| Roxbury..... | 29 | 23 | 6 | 3,330 | 3,336 |
| South Boston..... | 6 | 5 | 1 | 1,388 | 1,389 |
| East Boston..... | 1 | ..... | 1 | 1,014 | 1,015 |
| Charlestown..... | 22 | 15 | 7 | 808 | 815 |
| Brighton..... | 25 | ..... | 25 | 1,843 | 1,868 |
| West Roxbury..... | 96 | ..... | 96 | 3,321 | 3,417 |
| Dorchester..... | 65 | 15 | 50 | 4,893 | 4,943 |
| Hyde Park..... | 8 | ..... | 8 | 640 | 648 |
| Totals..... | 333 | 128 | 205 | 20,831 | 21,036 |

Table of Approximate Quantities, Lifts and Duties at Calf Pasture Pumping Station from January 1, 1934, to December 31, 1934, Inclusive.

| Month. | Total Gallons Pumped. | Average per Day, Gallons. | Minimum per Day, Gallons. | Maximum per Day, Gallons. | Average Lift, (Feet.) | Average Daily Duty in Million Foot-Pounds. | |
|-----------|-----------------------|---------------------------|---------------------------|---------------------------|-----------------------|--|--------------------|
| | | | | | | Per Gallon of Oil. | Per Kilowatt Hour. |
| January | 3,029,700.301 | 97,732.268 | 93,865.685 | 114,520,000 | 39.2 | ..... | 2.0 |
| February | 2,534,785.500 | 90,528.054 | 79,292.000 | 141,272,500 | 39.2 | ..... | 2.0 |
| March | 3,090,382.747 | 96,689.766 | 86,716.944 | 153,062,922 | 39.2 | ..... | 2.0 |
| April | 3,276,681.863 | 109,905.717 | 82,650.002 | 142,810,000 | 39.2 | ..... | 2.0 |
| May | 2,938,230.469 | 94,782.273 | 83,842.629 | 112,993,542 | 39.2 | 6.8 | 2.0 |
| June | 3,181,712.833 | 102,635.898 | 86,490.670 | 127,980,886 | 39.2 | 6.8 | 2.0 |
| July | 2,752,964.789 | 88,805.316 | 77,384.091 | 111,450,663 | 39.2 | 6.9 | 2.0 |
| August | 2,857,201.640 | 92,167.795 | 61,934.912 | 146,055,426 | 39.2 | 6.8 | 2.0 |
| September | 3,487,790.430 | 116,259.681 | 75,278.681 | 161,736,354 | 39.2 | 6.7 | 2.0 |
| October | 3,367,057.491 | 108,614.758 | 93,024.486 | 151,280,811 | 39.2 | 6.9 | 2.0 |
| November | 2,691,438.640 | 89,714.621 | 68,527.952 | 131,891,861 | 39.2 | 6.8 | 2.0 |
| December | 3,037,485.917 | 97,983.417 | 80,780.366 | 120,676,508 | 39.2 | 7.0 | 2.0 |
| Totals | 36,245,432.620 | | | | | | |
| Averages | 3,020,452.718 | 99,302.555 | ..... | ..... | 39.2 | 6.84 | 2.0 |

NOTES.— 11,340,108,120 gallons pumped by oil; 660,426 gallons of fuel oil used.

24,905,341,500 gallons pumped by electric power; 4,290,540 kilowatt hours used.

Quantities are based on plunger displacement and pump ratings, no allowance having been made for slip or condition of pump.

Running Time of Pumps.— No. 1-A, 312 hours, 5 minutes; No. 1-B, 308 hours, 25 minutes; No. 2-A, 2,613 hours, 40 minutes; No. 2-B, 2,813 hours, 15 minutes; No. 3, 5,156 hours, 40 minutes; No. 4, 4,781 hours, 40 minutes; No. 5, 6,383 hours, 35 minutes.

| | |
|--|--------------------|
| Total gallons pumped in 1934 | 36,245,432,620 |
| Daily average gallons pumped | 99,302,555 |
| Average dynamic head | 39.2 |
| Foot gallons, total | 1,420,820,958,704 |
| Foot pounds | 11,890,850,603,394 |

Cost of Pumping for 1934.

| ITEMS. | Cost. | Cost per Million Foot Gallons. |
|--|--------------|--------------------------------------|
| Labor..... | \$82,013 75 | \$0.05772 |
| Fuel oil, 660,426 gallons at \$0.02738..... | 18,082 68 | 0.01273 |
| Edison power, 4,290,540 kilowatt hours at \$0.01139 *..... | 48,869 20 | 0.03439 |
| Oils and waste..... | 1,255 79 | 0.00088 |
| Rubber valves and packing..... | 313 56 | 0.00022 |
| Miscellaneous renewals and supplies..... | 2,451 84 | 0.00173 |
| Totals..... | \$152,986 82 | \$0.10767 |
| Labor at screens..... | 7,338 24 | 0.00516 |
| Cleaning wells..... | 350 00 | 0.00025 |
| Grand totals..... | \$160,675 06 | \$0.11308 |

* This includes power for auxiliaries and lighting, but does not include the stand-by line on poles, which amounts to 300 kilowatt hours at \$1.274 = \$382.30.

APPENDIX E.

REPORT OF THE DIVISION ENGINEER OF
THE WATER DIVISION.

BOSTON, January 1, 1935.

To the Commissioner of Public Works.

I respectfully submit the following report of the activities, operations and expenditures of the Water Division for the year ending December 31, 1934.

A continuation of the lack of building construction in the city is reflected in the fact that only 4.39 miles of pipe, varying in size from 8-inch to 16-inch, was laid for extension as compared with 4.59 miles of pipe laid in 1933.

Owing to the construction of the East Boston Tunnel, and the widening of Cross street, it was possible to tie up many dead ends of the high service in the high value city proper section of the city.

In districts the extension of water mains laid were:

| | |
|------------------------|-------------|
| City Proper | 0.17 miles. |
| East Boston | .07 miles. |
| Roxbury | .02 miles. |
| Dorchester | .8 miles. |
| Brighton | .13 miles. |
| West Roxbury | 2.54 miles. |
| Hyde Park | .66 miles. |

In continuation of the policy of replacing the older and smaller water mains with larger sizes for the improvement of fire protection in the more densely populated sections of the city, 5,904 linear feet, or 1.12 miles of 4-inch and 6-inch pipe, laid fifty years or more ago, were replaced with 8-inch, 10-inch and 12-inch pipe. Some of the longer lengths were:

CITY PROPER.

Owing to construction of Sumner Tunnel and the widening of Cross street, it was necessary to relay

approximately 477 linear feet of 12-inch pipe in Cross street, between Hanover street and Haymarket square.

Dorchester avenue, between Summer street and Fort Point Channel Bridge, 824 feet 12-inch and 824 feet 10-inch pipe relaid with 12-inch pipe.

EAST BOSTON.

Boardman street, from Leyden street across McLellan Highway, 453 feet 12-inch pipe relaid with 12-inch pipe.

BRIGHTON.

Perthshire road, 178 feet 8-inch pipe relaid with 8-inch pipe.

HYDE PARK.

Reservation road, 186 feet 6-inch pipe relaid with 8-inch pipe.

Water street, on account of the widening and construction of Water street by the State Department of Public Works, the following changes in water pipes were made:

139 feet 4-inch and 6-inch mains relaid with 6-inch and 8-inch mains.

502 feet 10-inch mains relaid with 10-inch mains.

220 feet 12-inch mains relaid with 16-inch mains.

The High Pressure Fire System was extended by the laying of 44 feet 16-inch pipe and 596 feet 12-inch pipe in Cross street, between Hanover street and Haymarket square.

The Welfare forces were not used to any great extent on main pipe work during the year, due to the fact that the work was performed by C. W. A. and E. R. A. forces. The work performed by these organizations was very satisfactory and a total length of 6,293 linear feet of 8-inch and 12-inch pipes were laid.

During the year agreements were entered into between the United States Government and the City of Boston for the construction of new water mains under the Federal Emergency Administration of Public Works, commonly known as the P. W. A.

As a result of the above-mentioned agreements contracts were awarded as follows:

Relaying approximately 6,000 linear feet of cast-iron water mains with 48-inch steel water mains in Brookline

avenue, from the Brookline-Boston boundary line to Kenmore square. About 1,200 feet of this pipe was laid during the year.

Laying approximately 14,200 linear feet of 48-inch steel water main in the Arborway, from Pond and Prince streets to Forest Hills street, and in Forest Hills street, Glen road, Sigourney street and Walnut avenue. This work provides an additional supply of water to the Dorchester high service section. About 9,000 feet of this pipe was laid during the year.

The regular work of the Distribution Branch, consisting of leak repairs, installation of service pipes, caring for complaints, shutting off and letting on water, etc., was performed in such a manner and at such periods as to cause a minimum of delay and inconvenience to applicants for water, water takers and the general public. Practically all activities in the business district are now performed on Sundays and holidays.

The extreme cold weather of the past season caused the freezing of many service pipes throughout the city, which necessitated the employment of five electrically-operated thawing outfits, including a set of dry batteries.

Very respectfully,

D. M. SULLIVAN,
Division Engineer.

1934 — Financial Transactions — Water Division.

| | | |
|--|----------------------|------------------------|
| Balance after deducting expenditures of Water Income | | |
| Division | | \$4,094,343 79 |
| Balance January 1, 1934 | | 214,899 61 |
| Amount available for Water Division purposes . . . | | <u>\$4,309,243 40</u> |
| Expenditures from Revenue: | | |
| Current expenses and extensions | \$940,578 22 | |
| Metropolitan Water Assessments | <u>3,134,977 47</u> | |
| | | <u>4,075,555 69</u> |
| | | \$233,687 71 |
| Expenditures on Debt Account: | | |
| Interest on water loans | \$14,375 00 | |
| Serial loans, Boston water debt | 34,000 00 | |
| Serial loans, Hyde Park water debt, | <u>16,000 00</u> | |
| | | <u>64,375 00</u> |
| | | \$169,312 71 |
| Loan Account: | | |
| Balance outstanding first of year | \$388,000 00 | |
| Incurred during year | <u>500,000 00</u> | |
| Total loans | \$888,000 00 | |
| Paid during year | <u>50,000 00</u> | |
| | | \$838,000 00 |
| Balance end of year December 31, 1934 | | <u>\$838,000 00</u> |
| Construction Account: | | |
| Extension of mains (from revenue), | \$107,261 25 | |
| From loans for P. W. A. projects | | |
| No. 4214 and No. 7233 | 214,961 47 | |
| High Pressure Fire Service | <u>5,847 47</u> | |
| Total construction 1934 | | <u>\$328,070 19</u> |
| Cost of construction December 31, 1934 | \$25,233,397 56 | |
| Cost of construction December 31, 1933 | <u>24,905,327 37</u> | |
| | | \$328,070 19 |
| Increase of plant cost during 1934 | | <u>\$328,070 19</u> |
| Cost of existing works December 31, 1934: | | |
| Pipe, yards and buildings | \$94,832 16 | |
| Engineering expenses | 57,873 58 | |
| Distribution system (additions | | |
| 1934, \$322,222.72) | * 22,588,522 11 | |
| Hyde Park water works | 175,000 00 | |
| High Pressure Fire Service | <u>2,317,169 71</u> | |
| | | <u>\$25,233,397 56</u> |

* Includes \$155,023.89 expended for High Pressure Fire Service in 1925, 1926, 1931, 1932, 1933.

Table No. I.

Showing Length of Water Pipes and Connections Owned and Operated by the Public Works Department, Water Division, Water Service, and Number of Valves in Same, December 31, 1934.

| | DIAMETER OF PIPES IN INCHES. | | | | | | | | | | | | | | | | Total. |
|---|------------------------------|--------|--------|--------|--------|--------|--------|---------|-------|-----------|---------|-----------|-----------|--------|--------|-------|-----------|
| | | | | | | | | | | | | | | | | | |
| | 48. | 42. | 40. | 36. | 30. | 24. | 20. | 16. | 14. | 12. | 10. | 8. | 6. | 4. | 3. | 2. | |
| Length owned and operated December 31, 1933..... | 21,655 | 15,980 | 15,352 | 44,540 | 90,643 | 83,924 | 86,581 | 310,646 | 4,966 | 1,707,263 | 454,236 | 1,112,174 | 1,049,521 | 73,277 | 11,033 | 6,509 | 5,088,300 |
| Gate valves in same..... | 20 | 4 | 9 | 24 | 56 | 78 | 73 | 736 | 18 | 4,817 | 1,557 | 4,093 | 3,392 | 554 | 17 | 16 | 15,464 |
| Air valves in same..... | 38 | 5 | 10 | 35 | 114 | 80 | 42 | 93 | ..... | 59 | 1 | 5 | 1 | ..... | 1 | ..... | 483 |
| Blow-offs in same..... | 3 | 4 | 6 | 11 | 33 | 34 | 48 | 74 | ..... | 161 | 40 | 192 | 143 | 65 | 14 | 2 | 830 |
| Length laid and relaid during 1934..... | 10,285 | ..... | 19 | 40 | 82 | ..... | ..... | 589 | ..... | 11,380 | 852 | 6,873 | 321 | 148 | 192 | ..... | 30,781 |
| Gate valves in same..... | 2 | ..... | ..... | 1 | 1 | ..... | 2 | 3 | ..... | 63 | 8 | 42 | 3 | 4 | 1 | ..... | 127 |
| Air valves in same..... | 9 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 15 |
| Blow-offs in same..... | 4 | ..... | ..... | ..... | ..... | ..... | ..... | 96 | ..... | 2,620 | 1,715 | 318 | 1,573 | 377 | ..... | ..... | 17 |
| Length abandoned during 1934..... | ..... | ..... | 1,419 | ..... | 102 | ..... | ..... | ..... | ..... | 8 | 6 | 2 | 11 | 3 | ..... | ..... | 8,220 |
| Gate valves in same..... | 1 | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 32 |
| Air valves in same..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 3 |
| Blow-offs in same..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 | ..... | 2 | ..... | ..... | ..... | ..... | 5 |
| Length owned and operated December 31, 1934..... | 31,940 | 15,980 | 13,952 | 44,580 | 90,623 | 83,924 | 86,581 | 311,139 | 4,966 | 1,716,023 | 453,373 | 1,118,729 | 1,048,269 | 73,048 | 11,225 | 6,509 | 5,110,861 |
| Gate valves in same..... | 22 | 4 | 8 | 25 | 56 | 78 | 73 | 738 | 18 | 4,872 | 1,559 | 4,133 | 3,384 | 555 | 18 | 16 | 15,559 |
| Air valves in same..... | 47 | 5 | 10 | 35 | 114 | 80 | 44 | 96 | ..... | 57 | 1 | 5 | 1 | ..... | 1 | ..... | 495 |
| Blow-offs in same..... | 7 | 4 | 6 | 11 | 33 | 34 | 48 | 75 | ..... | 159 | 40 | 199 | 144 | 65 | 15 | 2 | 842 |
| 967.96 miles in system. | | | | | | | | | | | | | | | | | |

967.96 miles in system.

Table No. II.

HIGH PRESSURE FIRE SERVICE.

*Showing Length of Water Pipes and Connections and Number of Valves in Same,
December 31, 1934.*

| | 20-INCH. | 16-INCH. | 12-INCH. | 8-INCH. | 6-INCH. | Totals. |
|--|----------|----------|----------|---------|---------|---------|
| Length owned and operated December 31, 1933..... | 20,140 | 46,909 | 31,160 | ..... | ..... | 98,209 |
| Gates in same..... | ..... | 201 | 142 | 502 | ..... | 845 |
| Blow-offs in same..... | ..... | ..... | ..... | ..... | 6 | 6 |
| Length laid in 1934..... | ..... | 44 | 596 | ..... | ..... | 640 |
| Gate valves in same..... | ..... | ..... | 2 | ..... | ..... | 2 |
| Length owned and operated December 31, 1934..... | 20,140 | 46,953 | 31,756 | ..... | ..... | 98,849 |
| Gate valves in same..... | ..... | 201 | 144 | 502 | ..... | 847 |
| Blow-offs in same..... | ..... | ..... | ..... | ..... | 6 | 6 |

18.72 miles in system.

Table No. III.

Total Number of Hydrants in System December 31, 1934.

| | Lowry. | Boston Lowry. | Boston Post. | Ordinary Post. | Batchelder and Fineran Post. | Ludlow Post. | Chapman Post. | Coffin Post. | Matthews Post. | Boston. | Totals. |
|---|--------|---------------|--------------|----------------|------------------------------|--------------|---------------|--------------|----------------|---------|---------|
| Brighton (public) | 7 | 17 | 251 | 383 | 405 | | | | | 9 | 1,072 |
| " (private) | | | | 8 | | | | | | 2 | 10 |
| Charlestown (public) | 47 | 14 | 122 | 45 | 118 | | | | | 2 | 348 |
| " (private) | 13 | 1 | 2 | 37 | | | | | | 5 | 58 |
| City Proper (public) | 413 | 28 | 370 | 209 | 446 | | | | | 49 | 1,515 |
| " (private) | 5 | | 9 | 1 | 2 | | | | | 37 | 54 |
| Dorchester (public) | 68 | 87 | 626 | 1,007 | 776 | | | | | 14 | 2,578 |
| " (private) | 1 | 1 | 9 | | 2 | | | | | 4 | 17 |
| East Boston (public) | 11 | 7 | 160 | 187 | 172 | | | | | 5 | 542 |
| " (private) | 8 | 1 | | 9 | | | | | | 25 | 43 |
| Hyde Park (public) | | | 100 | 131 | 353 | 4 | 60 | 1 | | | 649 |
| " (private) | | | | | | 13 | 55 | | 4 | | 72 |
| Roxbury (public) | 27 | 32 | 302 | 248 | 929 | | | | | 2 | 1,540 |
| " (private) | 2 | 1 | 3 | 4 | | | | | | 9 | 19 |
| South Boston (public) | 58 | 15 | 200 | 170 | 204 | | | | | 14 | 661 |
| " (private) | 4 | 1 | | 15 | | | | | | 27 | 47 |
| West Roxbury (public) | 10 | 126 | 404 | 933 | 788 | | | | | 13 | 2,274 |
| " (private) | | | | 15 | 1 | | | | | 1 | 17 |
| Deer Island (private) | | | 1 | 19 | | | | | | | 20 |
| Gallup's Island (private) | | | | 3 | | | | | | 1 | 4 |
| Long Island (private) | | | | 6 | | | | | | | 6 |
| Rainsford Island (private) | | | | 3 | | | | | | | 3 |
| Thompson's Island (private) | | | | 2 | | | | | | | 2 |
| Quincy | | | | 9 | | | | | | | 9 |
| Total number (public) | 641 | 326 | 2,535 | 3,313 | 4,191 | 4 | 60 | 1 | | 108 | 11,179 |
| Total number (private and suburban) | 33 | 5 | 24 | 131 | 5 | 13 | 55 | | 4 | 111 | 381 |

WATERWORKS STATISTICS, CITY OF BOSTON.

FOR THE FISCAL YEAR ENDING DECEMBER 31, 1934.

DISTRIBUTION.

Mains.

Kind of pipe: Cast-iron, wrought iron, fabricated steel.

Size: 2-inch to 48-inch.

Extended, miles, 4.40.

Size enlarged, miles, .739.

Total miles now in use, 967.96.

Public hydrants added, 29.

Public hydrants now in use, 11,179.

Stop gates added, 95.

Stop gates now in use, 15,525.

Stop gates smaller than 4-inch, 34.

Number of blow-offs, 842.

Range of pressure on mains, 30 to 90 pounds.

Service.

Kind of pipe and size: Lead and lead lined, $\frac{1}{2}$ -inch to 2-inch; cast-iron 2-inch to 16-inch; wrought-iron and cement lined, $\frac{3}{4}$ -inch to 2-inch brass and copper, $\frac{5}{8}$ -inch to 2 $\frac{1}{2}$ -inch.

Service taps added, 63.

Total service taps now in use as per metered services, 100,797.

High Pressure Fire System.

Kind of pipe: Cast-iron.

Size: 8-inch to 20-inch.

Extended, miles, .27.

Total miles now in use, 18.72.

High pressure hydrants now in use, 503.

Range of pressure on mains, 50 to 300 pounds.

Gate valves added, 2.

Gate valves now in use, 847.

Number of blow-offs, 6.

Cost of Abandoned Main Pipe.

| STREET. | Location. | District. | Size (Inch.) | Feet. | Cost of Depart- ment Materials, etc. | Cost of Labor. | Cost of Inspection. | Total Cost. | Remarks. |
|--------------------------|---|--------------|-----------------|-------|--|-------------------|------------------------|----------------|--|
| Custom House street..... | Between Broad and India streets.... | City Proper. | 6 | 230 | \$521 55 | \$137 41 | \$3 67 | \$662 63 | Public, granite block and concrete base. |
| Garfield place..... | Between Washington street and dead end. | Roxbury. | 6 | 215 | 49 74 | 68 29 | ..... | 118 03 | Street abandoned. |
| | Totals..... | ..... | 6 | 445 | \$571 29 | \$205 70 | \$3 67 | \$780 66 | |
| Saratoga street..... | Between Pope and Curtis streets.... | East Boston. | 12 | 250 | \$168 89 | \$398 60 | \$44 89 | \$612 38 | Public, under construction. |

Cost of Relocation of Main Pipe.

| STREET. | Location. | District. | Size. (Inch.) | Feet. | Cost of Depart- ment Materials, etc. | Cost of Labor. | Cost of Inspection. | Total Cost. | Original Size. (Inch.) | Feet. | Remarks. |
|--------------------------|---|---------------|------------------|-------|--|-------------------|------------------------|----------------|------------------------------|-------|-----------------------------|
| Brookley road..... | Between Forest Hills and Locust streets. | West Roxbury. | 8 | 10 | \$15 84 | \$13 50 | \$5 36 | \$34 70 | 8 | 10 | P. W. A. project 7223B. |
| Whitford street..... | At Delano park..... | West Roxbury. | 8 | 206 | 80 08 | 656 70 | 57 46 | 794 24 | 8 | 206 | Public, under construction. |
| Standard street..... | Totals..... |  | ..... | 216 | \$95 92 | \$670 20 | \$62 82 | \$828 94 | ..... | 216 | |
| | Between Freeland street and dead end. | Dorchester. | 10 | 223 | \$489 35 | \$863 88 | \$16 75 | \$1,369 98 | 10 | 223 | Public, concrete. |
| Savin Hill avenue..... | Opposite No. 275..... | Dorchester. | 10 | 20 | 58 08 | 74 25 | 7 95 | 140 28 | 10 | 20 | Public, macadam. |
| New State highway..... | Between Fairmount and Dana avenues. | Hyde Park. | 10 | 502 | 1,109 04 | 982 01 | 74 37 | 2,165 42 | 10 | 502 | State highway. |
| | Totals..... |  | ..... | 745 | \$1,656 47 | \$1,920 14 | \$99 07 | \$3,675 68 | ..... | 745 | |
| Canal street..... | Between Haymarket square and Canal street. | City Proper. | 12 | 261 | \$899 74 | \$1,403 05 | \$98 90 | \$2,401 69 | 12 | 285 | Public, under construction. |
| Forest Hills street..... | Between Lotus street and Brookley road. | West Roxbury. | 12 | 211 | 405 33 | 517 66 | 25 46 | 948 45 | 12 | 211 | P. W. A. project 7223B. |
| Forest Hills street..... | Between Rossmore road and Williams street. | West Roxbury. | 12 | 234 | 609 11 | 598 42 | 67 00 | 1,274 53 | 12 | 234 | P. W. A. project 7223B. |
| Bates street..... | From Beech street..... | West Roxbury. | 12 | 77 | 89 17 | 280 59 | 22 10 | 391 86 | 12 | 77 | Public, under construction. |
| | Totals..... |  | ..... | 783 | \$2,003 35 | \$2,799 72 | \$213 46 | \$5,016 53 | ..... | 807 | |
| Southampton street..... | Between Moore and Ellery streets. | Roxbury. | 16 | 60 | \$165 11 | \$172 26 | \$4 66 | \$342 03 | 16 | 60 | Public, granite block. |

Cost of Replacement of Main Pipe.

| STREET. | Location. | District. | Size. (Inch.) | Feet. | Cost of Depart- ment Materials, etc. | Cost of Labor. | Cost of Inspection. | Total Cost. | Original Size. (Inch.) | Feet. | Remarks. |
|------------------------|---|--------------|------------------|-------|--|-------------------|------------------------|----------------|------------------------------|-------|-----------------------------|
| Bridge street..... | Between new State highway and railroad. | Hyde Park. | 4 | 19 | \$49 40 | \$6 00 | \$2 01 | \$57 41 | 4 | 19 | Private, gravel. |
| Fairmount terrace..... | Between new State highway and dead end. | Hyde Park. | 6 | 48 | \$73 50 | \$24 00 | \$2 01 | \$99 51 | 4 | 48 | Private, hard pan. |
| Pickering avenue..... | Between Walnut street and dead end. | Roxbury. | 6 | 236 | 320 87 | 477 12 | 29 34 | \$27 33 | 4 | 200 | Private, gravel. |
| | Totals..... | | | 284 | \$394 37 | \$501 12 | \$31 35 | \$926 84 | .... | 248 | |
| Salem street..... | At Cross street..... | City Proper. | 8 | 32 | \$131 71 | ..... | \$12 47 | ..... | 8 | 32 | Public, under construction. |
| Curtis street..... | Between Chaucer and Sara- toga streets. | East Boston. | 8 | 20 | 182 25 | \$115 00 | 3 35 | ..... | 6 | 20 | Public, under construction. |
| Chaucer street..... | Between Curtis and Moore streets. | East Boston. | 8 | 20 | 77 21 | 65 00 | 5 36 | ..... | 6 | 20 | Public, under construction. |
| Neponset avenue..... | Between new State highway and Loring street. | Hyde Park. | 8 | 91 | 128 90 | 45 50 | 2 01 | ..... | 6 | 91 | Public, hardpan. |
| Reservation road..... | Between Beacon and Brain- ard streets. | Hyde Park. | 8 | 145 | 683 62 | 464 32 | | | { 6 58 } 4 87 4 23 | | Public, macadam. |
| Dedham street..... | From Reservation road..... | Hyde Park. | 8 | 23 | | | | | | | |
| | Totals..... | | | 331 | | | | | { 4 110 } 6 189 8 32 | | |
| Byron street..... | At Pope street..... | East Boston. | 10 | 7 | \$8 71 | \$14 00 | \$1 34 | \$24 05 | 10 | 7 | Public, under construction. |
| Endicott street..... | At Cross street..... | City Proper. | 12 | 160 | 607 83 | ..... | 44 37 | ..... | 12 | 160 | Public, under construction. |

Cost of Replacement of Main Pipe.—Concluded.

| STREET. | Location. | District. | Size, (Inch.) | Feet. | Cost of Depart- ment Materials, etc. | Cost of Labor. | Cost of Inspection. | Total Cost. | Original Size (Inch.) | Feet. | Remarks. |
|--------------------------|--|--------------|-----------------------|-------|--|-------------------|------------------------|----------------|--|------------|---|
| Cross street..... | Between Hanover street and Washington Street North. | City Proper. | 12 | 460 | ..... | ..... | \$110 63 | ..... | 12 | 460 | Public, under construction. |
| Dorchester avenue..... | Between Summer street and drawbridge. | City Proper. | 12 | 1,648 | \$3,485 63 | \$35 70 | 79 56 | \$3,600 89 | 12 10 | 824 824 | Public, under construction, P. W. A. |
| Pope street..... | Between Curtis and Swift streets. | East Boston. | 12 | 228 | 537 59 | 839 82 | 15 41 | 1,302 82 | 6 | 228 | Public, under construction. |
| Curtis street..... | Between Chaucer and Pope streets. | East Boston. | 12 | 70 | 224 01 | 245 00 | 6 70 | 475 71 | 8 | 70 | Public, under construction. |
| Pope street..... | Between Curtis and Moore streets. | East Boston. | 12 | 252 | 479 34 | 355 10 | 16 08 | 850 52 | 6 10 | 113 139 | Public, under construction. |
| Pope street..... | Between Moore and Words- worth streets. | East Boston. | 12 | 190 | 372 08 | 424 60 | 23 28 | 820 05 | 6 | 190 | Public, under construction. |
| Dana avenue..... | Between Loring street and railroad. | Hyde Park. | 12 | 115 | 432 54 | 98 58 | 4 72 | 535 84 | 6 | 115 | Public, gravel. |
| Williams avenue..... | Between new State highway and Highland street. | Hyde Park. | 12 | 104 | 271 20 | 70 72 | 4 02 | 345 94 | 6 | 104 | Public, hardpan. |
| Fairmount avenue..... | Between new State highway and railroad. | Hyde Park. | 12 | 16 | 179 10 | 74 55 | 8 71 | 262 36 | 12 | 16 | Public, hardpan. |
| Tileston street..... | Between Tracton avenue and Radcliffe road. | Hyde Park. | 12 | 152 | 537 72 | 241 36 | 25 46 | 804 54 | 6 | 152 | Public, peat and sand. |
| Shirley street..... | Between Massachusetts av- enue and Norfolk avenue. | Roxbury. | 12 | 85 | 778 03 | ..... | ..... | ..... | 12 | 85 | Public, granite block and con- crete base. |
| Massachusetts avenue.... | At Shirley street..... | Roxbury. | 16 | 36 | 778 03 | 373 38 | 85 76 | 1,237 17 | 16 | 36 | |
| Totals..... |  | ..... | { 12 3,480 16 36 } | ..... | ..... | ..... | ..... | ..... | { 6 902 8 70 10 963 12 1,545 16 36 } | ..... | ..... |

| | | | | | | | | |
|-----------------------|---|----------|----------------------------|------------|-------------|----------|-----------------------------|------------------------|
| Brookline avenue..... | Between Brookline line and Deaconess road. | Roxbury. | { \$48, 1,400 40 19 } | | | | { 40 1,419 30 102 } | P. W. A. Project 4214. |
| Francis street..... | From Brookline avenue..... | Roxbury. | { 36 20 30 82 } | | | | { 30 102 12 18 } | Relaid. |
| Francis street..... | From Brookline avenue..... | Roxbury. | { 12 18 6 19 } | \$1,975 22 | \$39,235 36 | \$787 27 | { 6 19 6 8 } | Relocated. |
| Fenwood road..... | From Brookline avenue..... | Roxbury. | { 6 8 6 10 } | | | | { 6 10 6 10 } | Relocated. |
| Peabody street..... | From Brookline avenue..... | Roxbury. | { 6 37 12 18 30 82 } | | | | { 6 37 12 18 30 102 } | Relocated. |
| Deaconess road..... | From Brookline avenue..... | Roxbury. | { 40 19 48 1,400 } | | | | { 40 1,419 30 102 } | Relocated. |
| | Totals..... | | | | | | | |

* Steel pipe.

Cost of Extension of Main Pipe.

| STREET. | Location. | District. | Size (Inch.) | Feet. | Cost of Depart- ment Materials, etc. | Cost of Labor. | Cost of Inspec- tion. | Total Cost. | Remarks. |
|----------------------------|---|---------------|-----------------|-------|--|-------------------|-----------------------------|----------------|---------------------------------------|
| Cross street | Between Hanover street and Washington Street North. | City Proper. | 12 | 442 | ..... | ..... | \$104 60 | ..... | Public, under construction. |
| Washington Street North .. | Between Haymarket square and Stillman street. | City Proper. | 12 | 147 | ..... | ..... | 26 80 | ..... | Public, under construction. |
| Service road | Between Glenhill road and River street. | Dorchester. | 12 | 274 | \$1,189 00 | ..... | 232 56 | \$1,421 56 | C. W. A. project B74. |
| Gallivan Boulevard | Between Neponset avenue and Hallet street. | Dorchester. | 12 | 881 | 2,422 15 | ..... | 285 58 | 2,707 73 | C. W. A. project B74. |
| Favre street | Between Cummins Highway and Messinger street. | Dorchester. | 12 | 162 | 392 48 | \$209 30 | 19 40 | 621 18 | Public, under construction. |
| Freeland street | Between Standard street and dead end. | Dorchester. | 12 | 23 | 50 04 | 29 70 | 2 68 | 82 42 | Public, under construction. |
| Boardman street | Between Saratoga street and Boston and Maine Railroad. | East Boston. | 12 | 409 | 1,158 31 | 1,029 80 | 26 80 | 2,214 91 | Public, under construction. |
| Bennington street | At end of Boston line | East Boston. | 12 | 181 | 517 12 | 399 44 | ..... | 916 56 | Public, gravel. |
| Pope street | Between Moore and Wordsworth streets. | East Boston. | 12 | 262 | 468 16 | 520 00 | 23 28 | 1,011 44 | Public, under construction. |
| Passageway | Between new State highway and railroad. | Hyde Park. | 12 | 63 | 195 50 | 34 00 | 1 34 | 230 84 | Private, gravel. |
| New State Highway | Between Fairmount and Dana avenues. | Hyde Park. | 12 | 1,561 | 3,838 76 | 1,151 80 | 53 60 | 5,044 16 | State highway, clay, gravel, rock. |
| Orange street | Between Walworth and Brooks streets. | West Roxbury. | 12 | 80 | 284 51 | 446 26 | 11 52 | 742 29 | Public, under construction, rock. |
| Lyall street | Between Brook Farm Parkway and Lasell street. | West Roxbury. | 12 | 424 | 897 51 | 366 59 | 100 62 | 1,364 72 | C. W. A. project B74. |

| | | | | | | | | |
|--------------------------|---------------|----------------------|--------------------------|------------|--------------|----------|--------------|-----------------------------|
| Addington road..... | West Roxbury. | 12 | 309 | 793 91 | 11 40 | 145 34 | 950 65 | C. W. A. project B74. |
| Chellman street..... | West Roxbury. | 8 | 15 | | | | | |
| Dale street..... | West Roxbury. | { 16 12 | { 27 1,075 | | | | | |
| Sherin street..... | West Roxbury. | 12 | 23 | | | | | |
| Metropolitan avenue..... | West Roxbury. | { 12 16 | { 85 27 | 3,064 82 | 5 10 | 417 20 | 3,487 12 | C. W. A. project B74. |
| Providence street..... | West Roxbury. | { 4 8 | { 7 23 | | | | | |
| Greaton road..... | West Roxbury. | { 8 12 | { 20 336 | 1,114 80 | 299 90 | 43 55 | 1,458 25 | Public, under construction. |
| Esther road..... | West Roxbury. | 12 | 272 | 836 79 | 184 48 | 26 80 | 1,048 07 | Private, clay. |
| Totals..... | | { 16 12 8 4 | { 54 7,090 58 7 | | | | | |
| Haven avenue..... | Dorchester. | 16 | 400 | \$1,173 89 | \$1,356 64 | \$94 80 | \$2,625 33 | Private, ledge. |
| Addison street..... | East Boston. | 16 | 39 | 280 11 | 360 00 | 15 41 | 655 52 | Public, under construction. |
| Arborway..... | West Roxbury. | { #36 #48 | { 20 7,085 | \$1,454 00 | \$1,716 64 | \$110 21 | \$3,280 85 | |
| Forest Hills street..... | West Roxbury. | #48 | 1,800 | \$2,649 53 | \$209,216 09 | \$949 23 | \$212,814 85 | P. W. A. project 7223A. |
| Totals..... | | { #36 #48 | { 20 8,885 | | | | | |

* Steel pipe.

Cost of Extension of Main Pipe.—Continued.

| STREET. | Location. | District. | Size (Inch.) | Feet. | Cost of Depart- ment Materials, etc. | Cost of Labor. | Cost of Inspection. | Total Cost. | Remarks. |
|-------------------------|--|---------------|-----------------|-------|--|-------------------|------------------------|----------------|--|
| Chelsea place..... | From No. 90 Chelsea street..... | East Boston.. | 3 | 192 | \$533 97 | \$602 36 | ..... | \$1,136 33 | Private, macadam. |
| Seminary street..... | Between Austin street and Seminary place. | Charlestown. | 4 | 122 | \$637 21 | \$178 48 | ..... | \$815 69 | Public, granite block, granite lithic. |
| Washington street..... | Between Corey road and Brookline line. | Brighton. | 8 | 150 | \$587 77 | \$469 26 | \$26 52 | \$1,083 55 | Public, clay, rock, artificial stone sidewalk. |
| O'Connell road..... | Between Valley road and Washington street. | Dorchester. | 8 | 258 | 317 37 | ..... | 43 26 | 360 63 | C. W. A. project B74. |
| Sewall street..... | Between Southwick and Pope's Hill streets. | Dorchester. | 8 | 328 | 716 11 | 7 60 | 96 37 | 820 08 | C. W. A. project B74. |
| Pope's Hill street..... | Between Houghton and Sewall streets. | Dorchester. | 8 | 15 | ..... | ..... | ..... | ..... | ..... |
| Oak Hill avenue..... | Between West Selden street and dead end. | Dorchester. | 8 | 126 | 241 43 | 312 34 | 32 62 | 586 80 | Private, clay and ledge. |
| Hillsboro road..... | Between Ormond and Wellington Hill streets. | Dorchester. | 8 | 602 | 920 14 | 274 42 | 40 78 | 1,235 34 | Public, under construction. |
| Outlook road..... | At Hillsboro road..... | Dorchester. | 8 | 19 | ..... | ..... | ..... | ..... | ..... |
| Myrtlebank avenue..... | Between Hill Top and Milton streets. | Dorchester. | 8 | 305 | 511 96 | 580 27 | 38 51 | 1,130 74 | Public, gravel. |
| Wordsworth street..... | At Pope street..... | East Boston. | 8 | 28 | 252 40 | 75 00 | 2 68 | 330 08 | Public, under construction. |
| Windsor street..... | Between Tileston street and dead end. | Hyde Park. | 8 | 363 | 641 41 | \$27 92 | 71 02 | 1,540 35 | Private, hard pan and rock. |
| Washington street..... | Between Circuit street and Hawthorne avenue. | Roxbury. | 8 | 150 | 1,929 94 | 529 67 | 41 54 | 2,501 15 | Public, granite block and concrete base. |

| | | | | | | | | | |
|--------------------------|---|---------------|---|-----|----------|----------|--------|----------|---------------------------|
| Lindall street | Between Basile street and Murray Hill road. | West Roxbury. | 8 | 214 | 385 64 | 1,446 02 | 34 74 | 1,866 60 | Private, sand. |
| Dent street | Between Burard and Thurlow streets. | West Roxbury. | 8 | 182 | 324 83 | 1,414 63 | 115 24 | 1,854 70 | Public, hard pan. |
| Keith street | Between Carroll and Alden streets. | West Roxbury. | 8 | 144 | 232 38 | 980 28 | 58 96 | 1,271 62 | Private, dirt. |
| Eastwood circuit | South of Oakmere street | West Roxbury. | 8 | 102 | 211 68 | 431 79 | 64 32 | 767 79 | Private, gravel and sand. |
| Sherwood road | Between Russell and Bonad roads. | West Roxbury. | 8 | 215 | 371 20 | 266 46 | 37 28 | 674 94 | Private, clay. |
| American Legion Highway. | Between Stella road and Mt. Hope street. | West Roxbury. | 8 | 323 | 519 00 | 384 52 | 34 95 | 938 47 | Public highway, gravel. |
| Rendall road | Between Weld street and Brookline line. | West Roxbury. | 8 | 79 | 162 10 | 176 30 | 19 89 | 358 29 | Private, clay. |
| Maple terrace | Between Maple street and dead end. | West Roxbury. | 8 | 259 | 538 63 | 468 25 | 28 73 | 1,035 01 | Private, clay. |
| Rendall road | Between Weld and Church streets. | West Roxbury. | 8 | 116 | 195 01 | 305 83 | 30 94 | 531 78 | Private, clay. |
| Upland road | Between Centre and Vogel streets. | West Roxbury. | 8 | 95 | 188 17 | 71 25 | 7 67 | 267 09 | Private, gravel and sand. |
| Riverview street | Between Stinson street and North avenue. | West Roxbury. | 8 | 686 | 1,148 18 | 1,444 28 | 112 23 | 2,704 69 | Private, gravel and sand. |
| Bonair street | Between Addington road and Dwinell street. | West Roxbury. | 8 | 43 | 69 91 | 25 80 | 8 04 | 103 75 | Private, clay. |
| Addington road | Between Lyall and Bonair streets. | West Roxbury. | 8 | 276 | 366 01 | 173 31 | 23 45 | 562 77 | Private, clay. |
| Upland road | Between Riverview and Wright roads. | West Roxbury. | 8 | 287 | 370 97 | 679 92 | 60 16 | 1,111 05 | Private, gravel and sand. |
| Vogel street | Between Upland road and Stinson street. | West Roxbury. | 8 | 243 | 483 57 | 545 70 | 56 32 | 1,085 59 | Private, gravel and sand. |

Cost of Extension of Main Pipe.—Concluded.

| STREET. | Location. | District. | Size. (Inch.) | Feet. | Cost of Depart- ment Materials, etc. | Cost of Labor. | Cost of Inspection. | Total Cost. | Remarks. |
|---------------------------|--|---------------|------------------|-------|--|-------------------|------------------------|----------------|--|
| Buchanan road | Between Centre street and dead end. | West Roxbury. | 8 | 89 | \$398 12 | \$384 21 | \$34 84 | \$817 17 | Private, ashfill. |
| Andover road | Between Centre street and Buchanan road. | West Roxbury. | 8 | 34 | | | | | |
| Churchill road | Between St. Theresa avenue and dead end. | West Roxbury. | 8 | 190 | 379 06 | 211 56 | 37 52 | 628 14 | Private, clay and ledge. |
| Bald Knob road | Between Gardner avenue and dead end. | West Roxbury. | 8 | 166 | 263 20 | 272 77 | 37 52 | 573 49 | Metropolitan District Commission, park road. |
| Martin street | Between La Grange street and Eunions road. | West Roxbury. | 8 | 30 | 114 08 | 119 40 | 4 42 | 237 90 | Private, clay. |
| Cowing street | Between La Grange street and Swallow street. | West Roxbury | 8 | 45 | 106 53 | 179 10 | 8 84 | 294 47 | Private, clay and rock. |
| Overlook road | Between Bungalow and Cross roads. | West Roxbury. | 8 | 106 | 249 95 | 1,008 10 | 72 93 | 1,330 98 | Private, ledge. |
| | Totals | | 8 | 6,268 | \$13,196 65 | \$14,065 96 | \$1,282 49 | \$28,545 10 | |
| Custom House street | Between Broad and India streets. | City Proper. | 10 | 100 | \$608 61 | \$656 99 | \$90 47 | \$1,416 07 | Public, granite block and concrete base. |

Number of Premises Shut Off in 1934 for Unpaid Water Bills.

| District. | Number Shut Off. |
|--|---------------------|
| Dorchester | 525 |
| Brighton | 7 |
| West Roxbury | 107 |
| District covered by South End Yard | 1,126 |
| Hyde Park | 57 |
| East Boston | 27 |
| Charlestown | 102 |
| Total | <u>1,901</u> |

WATER INCOME DIVISION.

Statement of Each Year's Water Rates, 1912 to 1934, Inclusive,
as of December 31, 1934.

| YEAR. | Amount Assessed. | Amount Abated. | Amount Collected. | Outstanding. |
|--|---------------------|-------------------|----------------------|----------------|
| 1912..... | \$3,001,771 87 | \$58,369 39 | \$2,943,402 48 | |
| 1913..... | 3,004 331 52 | 50,147 90 | 2,954,183 62 | |
| 1914..... | 3,034,885 83 | 64,653 01 | 2,970,232 82 | |
| 1915..... | 2,960,797 45 | 57,782 09 | 2,903,015 36 | |
| 1916..... | 3,130,590 53 | 67,771 69 | 3,062,818 84 | |
| 1917..... | 3,120,878 86 | 77,353 75 | 3,043,525 11 | |
| 1918..... | 3,359,714 95 | 162,415 52 | 3,197,299 43 | |
| 1919..... | 3,210,147 91 | 95,812 76 | 3,114,335 15 | |
| 1920..... | 3,503,677 88 | 123,509 90 | 3,380,167 98 | |
| 1921..... | 3,615,663 51 | 90,946 23 | 3,524,717 28 | |
| 1922..... | 3,612,715 51 | 90,453 27 | 3,522,262 24 | |
| 1923..... | 3,817,642 72 | 77,449 02 | 3,740,193 70 | |
| 1924..... | 3,832,531 26 | 43,663 01 | 3,783,326 68 | \$5,541 57 |
| 1925..... | 3,875,434 21 | 39,069 54 | 3,829,104 47 | 7,260 20 |
| 1926..... | 3,910,119 54 | 44,686 14 | 3,858,039 73 | 7,393 67 |
| 1927..... | 3,979,098 85 | 44,081 67 | 3,916,414 63 | 18,602 55 |
| 1928..... | 4,418,039 84 | 37,728 75 | 4,370,918 39 | 9,392 70 |
| 1929..... | 5,018,462 49 | 44,717 02 | 4,957,801 52 | 15,943 95 |
| 1930..... | 4,864,180 27 | 43,427 75 | 4,797,654 02 | 23,098 50 |
| 1931..... | 4,749,546 18 | 44,626 42 | 4,660,990 53 | 43,929 23 |
| 1932..... | 4,611,396 02 | 32,737 34 | 4,460,180 54 | 118,478 14 |
| 1933..... | 4,572,022 54 | 23,739 77 | 4,138,367 85 | 409,914 92 |
| 1934..... | 4,702,978 78 | 20,621 45 | 2,882,037 52 | 1,800,319 81 |
| Total outstanding water rates December 31, 1934..... | | | | \$2,459,875 24 |

METER BRANCH.

| | |
|--|----------------|
| Meters in service December 31, 1933 | 101,295 |
| Meters permanently discontinued in 1934 | 124 |
| | <hr/> 101,171 |
| Meters applied on old services in 1934 | 11 |
| Meters applied on new services in 1934 | 328 |
| | <hr/> 101,510 |
| Total of meters in service December 31, 1934 | <u>101,510</u> |

METER BRANCH.

Table No. 1. Statement of Work Done During the Year 1934.

| MAKE. | New Sets. | Discontinued. | CHANGES. | | Tested. | Repaired in Shop. | Repaired in Service. | Resets. |
|----------------------------|--------------|---------------|----------|-------|---------|----------------------|-------------------------|---------|
| | | | Out. | In. | | | | |
| Hersey disc | 224 | 76 | 3,176 | 4,124 | 6,429 | 3,659 | 785 | 22 |
| Hersey rotary | | 1 | 22 | 3 | 38 | 3 | 44 | 1 |
| Hersey detector | 2 | | | 1 | | 4 | 99 | |
| Watchdog | 101 | 26 | 1,315 | 1,528 | 2,172 | 2,274 | 247 | 16 |
| Worthington disc | 4 | 11 | 692 | 379 | 913 | 397 | | |
| King | | 5 | 639 | 12 | 421 | 9 | 160 | |
| Crown | | 1 | 38 | | 49 | 2 | 14 | |
| Nash | | | 48 | 6 | 55 | 2 | 27 | |
| Empire | | | 3 | | 5 | | | |
| Arctic | 7 | | | 40 | 112 | | 6 | 1 |
| Federal | | 1 | 46 | 8 | 66 | 7 | 19 | 1 |
| American | 1 | 2 | 80 | 6 | 97 | 3 | 36 | |
| Lambert | | 1 | 37 | 5 | 55 | 1 | 13 | |
| Keystone | | | 4 | | 7 | | | |
| Trident | | | 14 | 2 | 19 | | 4 | |
| Totals | 339 | 124 | 6,114 | 6,114 | 10,438 | 6,361 | 1,454 | 41 |

Table No. II.

Meters in Service December 31, 1934.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | | | | Totals. |
|-----------------------|---------------------|---------------|-------|-----------------|-------|-------|-------|-------|-------|-------|-------|---------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | 1 $\frac{1}{2}$ | 2 | 3 | 4 | 6 | 8 | 10 | 12 | |
| Hersey disc..... | 51,147 | 3,515 | 1,756 | 927 | 417 | 160 | 112 | 32 | ..... | ..... | ..... | 58,066 |
| Hersey rotary..... | 336 | 244 | 136 | 103 | 138 | 52 | 21 | 15 | ..... | ..... | ..... | 1,045 |
| Hersey detector..... | ..... | ..... | ..... | ..... | ..... | 4 | 43 | 59 | 34 | 26 | 5 | 171 |
| Hersey compound..... | ..... | ..... | ..... | ..... | ..... | 1 | 11 | 13 | ..... | ..... | ..... | 25 |
| Watchdog..... | 22,820 | 983 | 1,051 | 713 | 424 | 335 | 76 | ..... | ..... | ..... | ..... | 26,402 |
| Worthington disc..... | 7,608 | 35 | 36 | 12 | 51 | 12 | ..... | ..... | ..... | ..... | ..... | 7,754 |
| King..... | 3,563 | 207 | 13 | 19 | 17 | ..... | ..... | ..... | ..... | ..... | ..... | 3,819 |
| Crown..... | 223 | 331 | 59 | 73 | 91 | 25 | 26 | 7 | ..... | ..... | ..... | 835 |
| Nash..... | 159 | 255 | 30 | 10 | 6 | ..... | ..... | ..... | ..... | ..... | ..... | 460 |
| Empire..... | 26 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 26 |
| Arctic..... | ..... | ..... | ..... | 23 | 19 | 5 | 2 | ..... | ..... | ..... | ..... | 49 |
| Federal..... | 785 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 785 |
| American..... | 842 | 327 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1,169 |
| Lambert..... | 233 | 94 | 58 | ..... | 14 | ..... | 2 | ..... | ..... | ..... | ..... | 401 |
| Keystone..... | 153 | 150 | 1 | 7 | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 314 |
| Trident..... | 142 | 3 | 6 | 1 | 12 | 9 | 11 | 1 | 2 | 2 | ..... | 189 |
| Totals..... | 88,037 | 6,144 | 3,146 | 1,888 | 1,192 | 603 | 304 | 127 | 36 | 28 | 5 | 101,510 |

Table No. III.

Meters in Shop December 31, 1934.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | | Totals. |
|-----------------------|---------------------|---------------|-------|----|----|-------|-------|-------|-------|---------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | 1½ | 2 | 3 | 4 | 6 | 12 | |
| Hersey disc..... | 580 | 102 | ..... | 5 | 16 | 2 | 4 | 1 | ..... | 710 |
| Hersey detector..... | | | | | | 1 | ..... | 2 | 1 | 4 |
| Watch dog..... | 9 | 32 | 4 | 13 | 13 | 7 | ..... |  |  | 78 |
| Worthington disc..... | 500 | ..... |  | 1 | 1 | ..... |  |  |  | 502 |
| Arctic..... | | | | | 1 | 21 | 8 | ..... |  | 30 |
| Hersey compound..... | | | | | | | | 1 | ..... | 1 |
| Crown..... | | | | | | | 2 | 1 | ..... | 3 |
| Keystone..... | | | | | | 2 | ..... | 1 | ..... | 3 |
| Trident..... | | | | | | 1 | ..... |  |  | 1 |
| Totals..... | 1,089 | 134 | 4 | 19 | 31 | 34 | 14 | 6 | 1 | 1,332 |

Table No. IV.
Meters Purchased in 1934.

| MAKE. | DIAMETER IN INCHES. | | | | | | Totals. |
|----------------------|---------------------|-------|----------------|-------|-------|-------|---------|
| | $\frac{5}{8}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | |
| Arctic..... | ..... | ..... | 20 | 20 | 25 | 10 | 75 |
| Hersey disc..... | 3,950 | 25 | ..... | ..... | ..... | ..... | 3,975 |
| Hersey detector..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Totals..... | 3,950 | 25 | 20 | 20 | 25 | 11 | 4,051 |

Table No. V.
Meters Reset in 1934.

| MAKE. | DIAMETER IN INCHES. | | | | | | | Totals. | Occupied. | Connection Pieces. |
|-----------------------|---------------------|---------------|-------|----------------|-------|-------|-------|---------|-----------|--------------------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | | | |
| Hersey disc..... | 2,617 | 79 | 20 | 7 | 5 | 1 | ..... | 2,729 | 22 | 2,707 |
| Watch dog..... | 346 | 27 | 11 | 4 | 1 | ..... | ..... | 389 | 16 | 373 |
| Federal..... | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 3 | 1 | 2 |
| Worthington disc..... | 96 | ..... | 1 | ..... | ..... | ..... | ..... | 97 | ..... | 97 |
| Hersey rotary..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 1 | ..... |
| King..... | 5 | ..... | ..... | ..... | ..... | ..... | ..... | 5 | ..... | 5 |
| American..... | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 3 | ..... | 3 |
| Arctic..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | 2 | 1 | 1 |
| Totals..... | 3,070 | 106 | 32 | 12 | 7 | 1 | 1 | 3,229 | 41 | 3,188 |

Table No. VI.

Meters Repaired in Service in 1934.

| MAKE. | Defaced. | Clock Broken. | Spindle Leak. | Coupling Leak. | Stoppage. | Miscellaneous. | Totals. |
|----------------------|----------|---------------|---------------|----------------|-----------|----------------|---------|
| Hersey disc..... | 66 | 49 | 408 | 156 | 12 | 94 | 785 |
| Hersey detector..... | 21 | 12 | ..... | ..... | 5 | 61 | 99 |
| Hersey rotary..... | 9 | 5 | ..... | 15 | 1 | 14 | 44 |
| Watch dog..... | 58 | 11 | 81 | 64 | 4 | 29 | 247 |
| King..... | 17 | 5 | 64 | 29 | 1 | 44 | 160 |
| Crown..... | 1 | 1 | 4 | 7 | ..... | 1 | 14 |
| Nash..... | 2 | ..... | 19 | 4 | 1 | 1 | 27 |
| Federal..... | 7 | 2 | ..... | 4 | 3 | 3 | 19 |
| American..... | 14 | 11 | ..... | 9 | ..... | 2 | 36 |
| Lambert..... | 5 | ..... | ..... | 6 | ..... | 2 | 13 |
| Trident..... | 1 | 1 | ..... | 2 | ..... | ..... | 4 |
| Arctic..... | ..... | 3 | ..... | 2 | ..... | 1 | 6 |
| Totals..... | 201 | 100 | 576 | 298 | 27 | 252 | 1,454 |

Table No. VII.

Meters Changed in 1934.

| MAKE | METERS OUT. DIAMETER IN INCHES. | | | | | | | Total ⁶ | METERS IN. DIAMETER IN INCHES. | | | | | | | Total ² | |
|-----------------------|---------------------------------|-----|-----|-----|----|----|----|--------------------|--------------------------------|-----|-----|-----|----|----|----|--------------------|-------|
| | METERS OUT. DIAMETER IN INCHES. | | | | | | | | METERS IN. DIAMETER IN INCHES. | | | | | | | | |
| | 3 | 4 | 1 | 1½ | 2 | 3 | 4 | | 3 | 4 | 1 | 1½ | 2 | 3 | 4 | | 10 |
| Hersey disc..... | 2,703 | 210 | 157 | 42 | 45 | 9 | 10 | 3,176 | 3,447 | 338 | 222 | 49 | 47 | 9 | 12 | 4,124 | |
| Hersey rotary..... | 1 | 10 | 5 | 5 | 1 | | | 22 | 1 | | 1 | | 1 | | | 3 | |
| Hersey detector..... | | | | | | | | | | | | | | | 1 | 1 | |
| W watch dog..... | 1,026 | 83 | 114 | 50 | 30 | 10 | 2 | 1,315 | 1,259 | 73 | 109 | 53 | 24 | 7 | 3 | 1,528 | |
| King..... | 612 | 14 | 8 | 4 | 1 | | | 639 | 12 | | | | | | | 12 | |
| Nash..... | 34 | 6 | 6 | 2 | | | | 48 | 5 | 1 | | | | | | 6 | |
| Worthington disc..... | 669 | 7 | 6 | 3 | 7 | | | 692 | 371 | 4 | 2 | 1 | | 1 | | 379 | |
| Lambert..... | 17 | 12 | 7 | | 1 | | | 37 | 2 | 2 | | 1 | | | | 5 | |
| American..... | 48 | 32 | | | | | | 80 | 3 | 3 | | | | | | 6 | |
| Crown..... | 9 | 4 | 11 | 5 | 4 | 4 | 1 | 38 | | | | | | 1 | | 2 | |
| Trident..... | 13 | | | | | 1 | | 14 | 1 | | | | | | | | |
| Keystone..... | 4 | | | | | | | 4 | | | | | | | | | |
| Federal..... | 46 | | | | | | | 46 | 8 | | | | | | | 8 | |
| Empire..... | 3 | | | | | | | 3 | | | | | | | | | |
| Arctic..... | | | | | | | | | | | | 21 | 15 | 4 | | 40 | |
| Totals..... | 5,185 | 378 | 314 | 111 | 89 | 24 | 13 | 6,114 | 5,109 | 421 | 334 | 125 | 87 | 21 | 16 | 1 | 6,114 |

Table No. VIII.

Causes for Meter Changes in 1934.

| MAKE. | Test. | Don't Register. | No Force. | Enlarged. | Spindle Leak. | Coupling Leak. | Frost. | Set Backwards. | Relocated. | Defaced. | Totals. |
|-----------------------|-------|-----------------|-----------|-----------|---------------|----------------|--------|----------------|------------|----------|---------|
| Hersey disc..... | 118 | 1,088 | 37 | 46 | 1,101 | 338 | 344 | 2 | 14 | 88 | 3,176 |
| Hersey rotary..... | 4 | 8 | | | | 6 | 4 | | | | 22 |
| Watch dog..... | 28 | 744 | 1 | 2 | 484 | 56 | | | | | 1,315 |
| King..... | 11 | 213 | 1 | 1 | 371 | 11 | 29 | 1 | 1 | | 639 |
| Nash..... | 1 | 10 | 1 | | 9 | | 27 | | | | 48 |
| Worthington disc..... | 15 | 378 | 17 | 1 | 137 | | 144 | | | | 692 |
| Lambert..... | 5 | 11 | 2 | | | 11 | 3 | | | 5 | 37 |
| American..... | 3 | 27 | 3 | | 25 | 9 | 11 | | | 2 | 80 |
| Trident..... | | 3 | | | 3 | | 4 | | | 4 | 14 |
| Crown..... | 2 | 4 | 2 | | 4 | 9 | 9 | | | 8 | 38 |
| Keystone..... | | 4 | | | | | | | | | 4 |
| Federal..... | | 11 | 1 | | 9 | 25 | | | | | 46 |
| Empire..... | | 3 | | | | | | | | | 3 |
| Totals..... | 187 | 2,504 | 65 | 50 | 2,143 | 465 | 575 | 3 | 15 | 107 | 6,114 |

Table No. IX.

Meters Applied in 1934.

| MAKE. | DIAMETER IN INCHES. | | | | | | | | Totals. |
|-----------------------|---------------------|---------------|----|----------------|----|---|---|----|---------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | 10 | |
| Hersey disc..... | 182 | 5 | 12 | 13 | 8 | 3 | 1 | | 224 |
| Hersey detector..... | | | | | | | 1 | 1 | 2 |
| Watch dog..... | 86 | 2 | 5 | 6 | 2 | | | | 101 |
| Worthington disc..... | 4 | | | | | | | | 4 |
| Arctic..... | | | | 1 | 3 | 1 | 2 | | 7 |
| American..... | | 1 | | | | | | | 1 |
| Totals..... | 272 | 8 | 17 | 20 | 13 | 4 | 4 | 1 | 339 |

| | |
|--------------------------------|-----|
| Meters applied on old services | 11 |
| Meters applied on new services | 328 |
| Total applied | 339 |

Table No. X.

Meters Discontinued in 1934.

| MAKE. | DIAMETER IN INCHES. | | | | | | | Totals. | Connection Pieces. | Vacancy. | Discontinued. | Enlarged. |
|-----------------------|---------------------|---------------|----|----------------|----|---|---|---------|--------------------|----------|---------------|-----------|
| | $\frac{5}{8}$ | $\frac{3}{4}$ | 1 | $1\frac{1}{2}$ | 2 | 3 | 4 | | | | | |
| Hersey disc..... | 1,767 | 77 | 29 | 11 | 11 | 2 | 1 | 1,898 | 1,706 | 112 | 76 | 4 |
| Worthington disc..... | 365 | 4 | | | 1 | | | 370 | 345 | 14 | 11 | |
| Watch dog..... | 775 | 21 | 17 | 5 | 4 | 3 | | 825 | 752 | 45 | 26 | 2 |
| King..... | 228 | 4 | 3 | | | | | 235 | 225 | 5 | 5 | |
| Hersey rotary..... | 2 | 2 | | 3 | 1 | | | 8 | 6 | 1 | 1 | |
| Lambert..... | 2 | 3 | | | | | | 5 | 3 | 1 | 1 | |
| American..... | 36 | 9 | | | | | | 45 | 40 | 2 | 2 | 1 |
| Crown..... | 2 | 3 | 3 | | 1 | | | 9 | 6 | 2 | 1 | |
| Federal..... | 27 | | | | | | | 27 | 26 | | 1 | |
| Keystone..... | 3 | 1 | | | | | | 4 | 3 | 1 | | |
| Nash..... | 10 | | | | | | | 10 | 9 | 1 | | |
| Empire..... | 1 | | | | | | | 1 | 1 | | | |
| Trident..... | 7 | | | | | | | 7 | 7 | | | |
| Totals..... | 3,225 | 124 | 52 | 19 | 18 | 5 | 1 | 3,444 | 3,129 | 184 | 124 | 7 |

APPENDIX F.

REPORT OF THE BOSTON AND CAMBRIDGE
BRIDGE COMMISSION.

BOSTON, January 2, 1935.

To the Honorable the Mayor:

SIR—As Commissioner for the City of Boston, I respectfully submit herewith the annual report of the Boston and Cambridge Bridges Commission for the year ending December 31, 1934.

The commission is composed of two members, one appointed by the Mayor of the City of Boston and the other by the Mayor of the City of Cambridge, under provisions of chapter 467, Acts of 1898.

The commission has charge of the maintenance of the following named bridges between Boston and Cambridge:

Cottage Farm, Longfellow and Prison Point.

As there is no separate appropriation made for the City of Boston's portion of the expenses of this commission, the same is taken from the appropriation for the Bridge and Ferry Division, Bridge Service. The amount expended during the fiscal year ending December 31, 1934, was \$6,711.66.

BRIDGES, REPAIRS, ETC., LONGFELLOW BRIDGE.

A final payment of \$459.82 was made to Quinn Brothers on February 6, 1934, under contract for furnishing and installing cables and lights on this bridge.

Respectfully submitted,

C. J. CARVEN,
Commissioner for the City of Boston.

**Boston and Cambridge Bridges. Expenditures for the Year Ending
December 31, 1934.**

Being the Portion Paid by the City of Boston, Which is One Half of the Total Expenditure.

| | Administration. | Cottage Farm Bridge. | Longfellow Bridge. | Prison Point Bridge. | Totals. |
|------------------------------|-----------------|-------------------------|--------------------|----------------------|------------|
| Salaries..... | \$122 16 | ..... | \$3,204 84 | ..... | \$3,327 00 |
| Inspection..... | ..... | \$103 90 | 229 90 | \$241 90 | 575 70 |
| Light..... | ..... | 939 43 | 1,797 48 | ..... | 2,736 91 |
| Supplies..... | ..... | ..... | 64 15 | ..... | 64 15 |
| Printing and stationery..... | 7 90 | | | | 7 90 |
| Totals..... | \$130 06 | \$1,043 33 | \$5,296 37 | \$241 90 | \$6,711 66 |

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